Jan Delavat

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

# SEARCH REQUEST FORM

11997

Requestor's Name: Sakiba Qazi Serial Number: 09/720,940

Date: 4/21/04 Phone: 2062 Art Unit: 1616

Mail 4C-70

Inventor Oschmann, R et al

**Search Topic:**

Please write a detailed statement of search topic. Describe specifically as possible the subject matter to be searched. Define any terms that may have a special meaning. Give examples or relevent citations, authors, keywords, etc., if known. For sequences, please attach a copy of the sequence. You may include a copy of the broadest and/or most relevent claim(s).

This application is a 371 of PCT/DE 99/01812 filed on 6/19/1999

Please search for

(1) Ch-11-19 for Ginko biloba extracts

(2) Ch 19-27 - method of preparing Ginkgo biloba extracts (see step c)

Please note the term "ultra-filteration" is ultrafiltrate?

Prior art may not be using this term but filtration process may be very fine by using similar type of filter papers or filteration process?

Please see attached sheet

Thank you

## STAFF USE ONLY

Date completed: 4/22/04

Searcher:

Terminal time:

Elapsed time: (5 + 5)

CPU time:

Total time:

Number of Searches:

Number of Databases:

**Search Site**

- ✓ STIC
- ____ CM-1
- ____ Pre-S

**Type of Search**

- ____ N.A. Sequence
- ____ A.A. Sequence
- ____ Structure
- ✓ Bibliographic

**Vendors**

- ____ IG
- ✓ STN
- ____ Dialog
- ____ APS
- ____ Geninfo
- ____ SDC
- ____ DARC/Questel
- ____ Other

PTO-1590 (9-90)

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=> d his

     (FILE 'HOME' ENTERED AT 11:30:30 ON 22 APR 2004)
               SET COST OFF

     FILE 'REGISTRY' ENTERED AT 11:30:38 ON 22 APR 2004
               E GINKGOLIDE/CN
L1           4 S E4,E6-E8
               E GINKGOLIDE B/CN
               E E3,E10
               E GINKGOLIDE B/CN
L2           2 S E3,E10
L3           5 S E13,E14,E16-E18
               E GINKGOLIC ACID/CN
L4           2 S E3-E5
               E BILOBALIDE/CN
L5           1 S E3

     FILE 'HCAPLUS' ENTERED AT 11:32:52 ON 22 APR 2004
               E GINKGO/CT
L6        1851 S E4
               E E3+ALL
L7        2267 S E5+NT
L8           1 S E7/BI
L9        2273 S E8,E9/BI
               E E4+ALL
L10       2269 S E4+NT
L11       2299 S (GINKGO OR GINGKO)()BILOBA?
L12       2669 S L6-L11
L13          6 S L12 AND (ULTRAFILT? OR ULTRA(L)FILTR?)
L14          4 S L13 NOT (ELECTRON OR FOODS)/TI
L15          1 S (WO99-DE1812 OR DE98-19829516)/AP,PRN
               E WILLMAR/PA,CS
L16         19 S E13-E34
               E OSCHMANN R/AU
L17         25 S E3,E4
               E OESCHMANN R/AU
               E GRETHLEIN E/AU
L18          4 S E3-E5
L19          2 S L12 AND L16-L18
L20          5 S L14,L15,L19
L21        247 S L12 AND L1-L3
L22        339 S L12 AND (GINKGOLIDE OR GINGKOLIDE)
L23         66 S L12 AND (GINKGOLIC OR GINGKOLIC)()ACID
L24        398 S L21-L23
L25        138 S L12 AND ?TERPEN?(L)?LACTONE?
L26        178 S L12 AND ?FLAVON?(L)?GLYCOSIDE?
L27        554 S L24-L26
               E FILTRATION/CT
               E E3+ALL
L28      22283 S E3,E2+NT
               E E12+ALL
L29      66577 S E2+NT
               E E1+ALL
L30         83 S L12 AND L28,L29
L31         17 S L30 AND (PY<=1998 OR PRY<=1998 OR AY<=1998)
               SEL DN AN 1 4 11 14 16 17
L32         11 S L31 NOT E1-E18
L33         15 S L20,L32
L34        228 S L27 AND (PY<=1998 OR PRY<=1998 OR AY<=1998)
L35          7 S L34 AND  (?FILTER? OR ?FILTR?)
               SEL DN AN 6 7
L36          5 S L35 NOT E19-E24
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L37          18 S L33,L36
L38          18 S L37 AND L6-L37
L39          14 S L38 AND (LEAF OR LEAVE)
L40           4 S L38 NOT L39
L41           3 S L40 NOT COUMAROYL
L42          17 S L39,L41
L43          15 S L42 AND (?FLAVON? OR ?TERPEN? OR ?LACTONE?)
L44           2 S L42 NOT L43
L45           1 S L44 NOT ANTIOXIDANT
L46          16 S L43,L45
L47           0 S L12 AND COLD(L)?PRECIPITAT?
                E PRECIPITATION/CT
L48       23147 S E3,E5+NT
L49          18 S E25
                E E3+ALL
                E E2+ALL
L50       20084 S E2+NT
                E PRECIPITATION, THERMAL/CT
                E E3+ALL
L51           0 S L12 AND L48-L50

=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 11:56:39 ON 22 APR 2004
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FILE COVERS 1907 - 22 Apr 2004  VOL 140 ISS 17
FILE LAST UPDATED: 21 Apr 2004  (20040421/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

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L46  ANSWER 1 OF 16  HCAPLUS  COPYRIGHT 2004 ACS on STN
AN   2004:237574  HCAPLUS
ED   Entered STN:  23 Mar 2004
TI   Further purification of Ginkgo biloba flavones
     by ultrafiltration
AU   Xu, Zhi-hong; Xiao, Ze-yi; Li, Lei; Zhang, Zhi-bing
CS   Department of Chemical Engineering, Nanjing University, Nanjing, Jiangsu,
     210093, Peop. Rep. China
SO   Jingxi Huagong (2004), 21(2), 112-114, 124
     CODEN: JIHUFJ; ISSN: 1003-5214
PB   Jingxi Huagong Bianjibu
DT   Journal
LA   Chinese
CC   9 (Biochemical Methods)
AB   Expts. for further concentration of flavones from Ginkgo
     biloba extract were carried out by use of a sulfonated
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polyethersulfone **ultrafiltration** membrane with mol. weight cut-off of 10000. Concentration of total **flavones** in the filtrate can be elevated from w(**flavones**) = 21.3 % in the original extract to w(**flavones**) = 39.2%. The effects of feed temperature and filtration pressure on the operation were tested and discussed. The results showed that the flux of **ultrafiltration** increased from 7.5 L/(m2 · h) to 11.2 L/(m2 · h) when the temperature varied from 30 °C to 40 °C, and it increased from 6.1 L/(m2 · h) to 10.0 L/(m2 · h) as the pressure changed from 0.15 MPa to 0.25 MPa, but both temperature and pressure bad little impact an the selectivity.

L46 ANSWER 2 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:576795 HCAPLUS
DN 139:393391
ED Entered STN: 29 Jul 2003
TI Preparation of extracts of **Ginkgo biloba leaves**
AU Lei, Tianqian; Hu, Xiaojuan; Gao, Lin; Li, Huitao; Xu, Pinghui
CS Zhengzhou Pharmaceutical R + D Centre, Zhengzhou, 450002, Peop. Rep. China
SO Zhongguo Yiyao Gongye Zazhi (2002), 33(11), 536-538
CODEN: ZYGZEA; ISSN: 1001-8255
PB Zhongguo Yiyao Gongye Zazhi Bianjibu
DT Journal
LA Chinese
CC 11-1 (Plant Biochemistry)
AB The **Ginkgo biloba leaves** exts. was prepared using reflux extraction method and **ultrafiltration** combined with absorption resin chromatog. as purification method. Extraction conditions such as extraction reagents, the ratio of liquid to solid, extraction times, the condensing and drying temperature, and extract time were optimized, and the extractive ratio of total **flavonoids** was about 78% in the optimal condition. The purification process was effective, and the content of total **flavonoids** was above 24%.
ST **flavonoid** Ginkgo **leaf** extn
IT **Ginkgo biloba**
**Leaf**
(preparation of exts. of **Ginkgo biloba leaves**)
IT **Flavonoids**
RL: BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation)
(preparation of exts. of **Ginkgo biloba leaves**)
IT 117-39-5P, Quercetin 480-19-3P, Isorhamnetin 520-18-3P, Kaempferol
RL: BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation)
(preparation of exts. of **Ginkgo biloba leaves**)

L46 ANSWER 3 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:142558 HCAPLUS
DN 136:189317
ED Entered STN: 22 Feb 2002
TI **Flavone**-containing plant extract solutions having improved storage and heat stability
IN Herrmann, Joachim; **Oschmann, Rainer**; Stumpf, Heinz; Thoele, Marc
PA **Willmar Schwabe G.m.b.H. & Co., Germany; Willmar Schwabe G.m.b.H.**
SO PCT Int. Appl., 12 pp.
CODEN: PIXXD2
DT Patent
LA German
IC ICM A61K047-10

ICS A61K047-26; A61K035-78
CC 63-3 (Pharmaceuticals)
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 2002013869 | A2 | 20020221 | WO 2001-DE2871 | 20010724 |
| | WO 2002013869 | A3 | 20020620 | | |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

| | | | | | |
|---|---|---|---|---|---|
| | AU 2001081717 | A5 | 20020225 | AU 2001-81717 | 20010724 |
| | EP 1309353 | A2 | 20030514 | EP 2001-960130 | 20010724 |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

| | | | |
|---|---|---|---|
| PRAI | DE 2000-10040610 | A | 20000816 |
| | WO 2001-DE2871 | W | 20010724 |

AB The invention relates to **flavone**-containing plant extract solns. that are characterized by improved storage and heat stability with regard to their content in pharmaceutically relevant ingredients (especially **flavones** and/or **terpenes**). The plant extract solns. contain the corresponding plant exts. in an aqueous alc. solvent in an amount of from 2-40 weight/weight% alc. in water. The pH of the solns. is in the acidic range of from pH 2 to pH 6. The solns. are used in the production of two-component injections: **flavone**-containing plant extract solution as the component (A); and a sterile buffer salt solution that has a physiol. acceptable composition as the component (B). The two components (A) and (B) are mixed for administration but are produced sep. and stored sep. in sep. containers until administered. Thus component A contained (weight/weight%): Ginkgo extract 0.916; sorbit 4.985; ethanol (96%) 19.940; 1N hydrochloric acid 0.474; water 73.685. The solution was sterilized; 2 mL of the solution was mixed with 2 mL buffer to obtain the physiol. acceptable pH 6.8.

ST **flavone** plant ext soln injection storage heat stability

IT **Ginkgo biloba**
Hawthorn (Crataegus)
Horse chestnut (Aesculus)
(extract of; **flavone**-containing plant extract solns. having improved storage and heat stability)

IT Buffers
Flower
Heat
**Leaf**
Osmolarity
Sterilization and Disinfection
Storage
Thermal stability
pH
(**flavone**-containing plant extract solns. having improved storage and heat stability)

IT Alditols
**Flavones**
**Terpenes**, biological studies
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(**flavone**-containing plant extract solns. having improved storage and heat stability)

IT Drug delivery systems
(injections; **flavone**-containing plant extract solns. having improved storage and heat stability)
IT Drug delivery systems
(solns.; **flavone**-containing plant extract solns. having improved storage and heat stability)
IT 50-70-4, Sorbit, biological studies 57-55-6, Propylene glycol, biological studies 64-17-5, Ethanol, biological studies 7632-05-5, Sodium phosphate 7647-01-0, Hydrochloric acid, biological studies 7647-14-5, Sodium chloride, biological studies 7664-38-2, Phosphoric acid, biological studies
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(**flavone**-containing plant extract solns. having improved storage and heat stability)

L46 ANSWER 4 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:300788 HCAPLUS
DN 132:326032
ED Entered STN: 09 May 2000
TI Manufacture of ginkgo **leaf** extract using dimethyl ether as extractant
IN Miyata, Kazushige
PA Asahi Chemical Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM A61K035-78
ICS A61K035-78; A23L001-30; A61P009-00
CC 63-4 (Pharmaceuticals)
Section cross-reference(s): 11, 17, 62
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | JP 2000128792 | A2 | 20000509 | JP 1998-299238 | 19981021 <-- |
| PRAI | JP 1998-299238 | | 19981021 <-- | | |

AB The extract, which shows immunostimulating action, blood platelet activating factor-inhibiting action, cerebral function-improving action, etc. and is useful for drugs, food, and cosmetics, is manufactured as powder by (1) crushing **Ginkgo biloba leaves**, (2) extracting the crushed **leaves** with water-containing Me2O, (3) separating the extract from the extraction residue by **filtration**, (4) evaporating Me2O from the **filtrate** to precipitate hydrophobic substances in H2O, (5) removing the precipitate from the aqueous extract, (6) concentrating the aqueous extract, (7) adding electrolytes to the concentrated extract to precipitate the active ingredients, (8) recovering the insol. fraction, (9) dissolving the insol. fraction in water-containing Me2O, (10) separating the insol. matter, and then (11) removing the solvent and drying the residue. Extraction temperature and pressure may be 10-30° and 0.2-0.8 MPa, resp. Te electrolytes may be sulfates, chlorides, or nitrates of metals or ammonium. The method provides a ginkgo extract free from residual organic solvent. An extract powder manufactured from 100 g dried G. biloba **leaves** as described above contained **flavone glycosides** (total amts. of quercetin, kaempferol, and isorhamnetin) 24%, **terpene lactones** (total amts. of bilobalide, **ginkgolides** A, B, and C) 6%, **ginkgolic acid** ≤10 ppm, and Me2O ≤1 ppm.
ST ginkgo **leaf** ext manuf dimethyl ether extractant
IT **Glycosides**
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PUR

(Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
(**flavonoid**, oxo; manufacture of ginkgo **leaf** extract using di-Me ether as extractant)

IT **Terpenes**, biological studies
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
(**lactones**; manufacture of ginkgo **leaf** extract using di-Me ether as extractant)

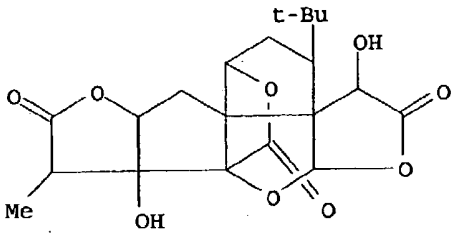
IT Extractants
**Ginkgo biloba**
(manufacture of ginkgo **leaf** extract using di-Me ether as extractant)

IT 117-39-5P, Quercetin 480-19-3P, Isorhamnetin 520-18-3P, Kaempferol **15291-75-5P**, **Ginkgolide** A **15291-76-6P**, **Ginkgolide** C **15291-77-7P**, **Ginkgolide** B 33570-04-6P, Bilobalide
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
(manufacture of ginkgo **leaf** extract using di-Me ether as extractant)

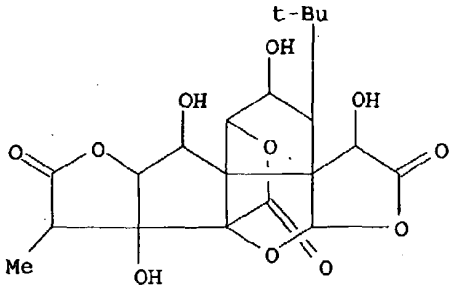
IT 115-10-6, Dimethyl ether
RL: NUU (Other use, unclassified); USES (Uses)
(manufacture of ginkgo **leaf** extract using di-Me ether as extractant)

IT **15291-75-5P**, **Ginkgolide** A **15291-76-6P**, **Ginkgolide** C **15291-77-7P**, **Ginkgolide** B
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
(manufacture of ginkgo **leaf** extract using di-Me ether as extractant)

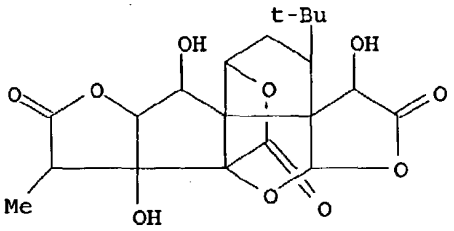
RN 15291-75-5 HCAPLUS
CN 9H-1,7a-(Epoxymethano)-1H,6aH-cyclopenta[c]furo[2,3-b]furo[3',2':3,4]cyclopenta[1,2-d]furan-5,9,12(4H)-trione, 3-(1,1-dimethylethyl)hexahydro-4,7b-dihydroxy-8-methyl-, (1R,3S,3aS,4R,6aR,7aR,7bR,8S,10aS,11aS)- (9CI) (CA INDEX NAME)




RN 15291-76-6 HCAPLUS
CN 9H-1,7a-(Epoxymethano)-1H,6aH-cyclopenta[c]furo[2,3-b]furo[3',2':3,4]cyclopenta[1,2-d]furan-5,9,12(4H)-trione, 3-(1,1-dimethylethyl)hexahydro-2,4,7b,11-tetrahydroxy-8-methyl-, (1S,2R,3S,3aS,4R,6aR,7aR,7bR,8S,10aS,11R,11aR)- (9CI) (CA INDEX NAME)




RN 15291-77-7 HCAPLUS
CN 9H-1,7a-(Epoxymethano)-1H,6aH-cyclopenta[c]furo[2,3-b]furo[3',2':3,4]cyclopenta[1,2-d]furan-5,9,12(4H)-trione, 3-(1,1-dimethylethyl)hexahydro-4,7b,11-trihydroxy-8-methyl-, (1R,3S,3aS,4R,6aR,7aR,7bR,8S,10aS,11R,11aR)- (9CI) (CA INDEX NAME)




L46 ANSWER 5 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:116846 HCAPLUS
DN 132:148759
ED Entered STN: 18 Feb 2000
TI A method of identifying and recovering products exuded from a plant
IN Raskin, Ilya
PA Rutgers, the State University of New Jersey, USA
SO PCT Int. Appl., 78 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A01K065-00
ICS C12Q001-02
CC 9-12 (Biochemical Methods)
Section cross-reference(s): 5, 11, 16, 17, 62, 63
FAN.CNT 3

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 2000007437 | A1 | 20000217 | WO 1999-US17893 | 19990806 <-- |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| CA 2339739 | AA | 20000217 | CA 1999-2339739 | 19990806 <-- |
| AU 9953423 | A1 | 20000228 | AU 1999-53423 | 19990806 <-- |

EP 1100324 A1 20010523 EP 1999-939064 19990806 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
PRAI US 1998-130185 A 19980806 <--
WO 1999-US17893 W 19990806

AB This invention provides a method of identifying biol. active or otherwise valuable substances exuded from or onto a plant surface, specifically the plant cuticle. This invention also provides a method of identifying and recovering substances exuded from or onto the roots of a plant. The invention further comprises libraries of substances exuded or secreted from various plant species, which may be elicited or induced to produce one or more of such substances. **Leaves** and roots of various plants were contacted with solvent and the solvent exts. were bioassayed against bacteria and fungi suspensions to screen for antibacterial and antifungal activity. Root exudates and cuticular washings were also subjected to a sniffing test.

ST plant exudate bioagent identification purifn; antimicrobial agent screening plant exudate; odor screening plant wash

IT **Isoflavonoids**
RL: ANT (Analyte); BPN (Biosynthetic preparation); PUR (Purification or recovery); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(HPLC separation of, from soybeans; identifying and recovering products exuded from plants)

IT Cell wall
(as biotic elicitor, for agent recovery from roots; identifying and recovering products exuded from plants)

IT Condiments
(flavor-enhancing; identifying and recovering products exuded from plants)

IT Acalypha hispida
Aconitum napellus
Actinidia kolomikta
Agrimony (Agrimonia eupatoria)
Agrimony (Agrimonia pilosa)
Ajuga reptans
Alchemilla
Allium fistulosum
Allium nutans
Anchusa officinalis
Anemone japonica
Angelica polymorpha
Angelica sinensis
Anthericum ramosum
Anthurium elegans
Antibacterial agents
Antimicrobial agents
Aristolochia clematitis
Arnica chamissonis
Artemisia absinthium
Avens (Geum fanieri)
Avens (Geum macrophyllum)
Baptisia australis
Barberry (Berberis)
Belladonna (Atropa belladonna)
Bergenia crassifolia
Bioassay
Birch (Betula alba)
Birch (Betula nigra)
Birch (Betula pendula)
Brassica juncea
Cachrys alpina
Calycanthus floridus

Campanula carpatica
Caper (Capparis spinosa inermis)
Carlina acaulis
Celosia argentea cristata
Celtis occidentalis
Cerasus japonica
Chestnut (Castanea sativa)
Chickpea (Cicer arietinum)
Chilopsis linearis
Chimonanthus praecox
Cistus incanus
Cladium mariscus
Clematis mandschurica
Clematis recta
Clerodendrum speciosissimum
Codiaeum variegatum
Columbine (Aquilegia vulgaris)
Comfrey (Symphytum officinale)
Convallaria majalis
Crambe pontica
Creosote bush (Larrea tridentata)
Cunninghamia lanceolata
Cyathula officinalis
Cyperus esculentus
Cypress (Cupressus lusitanica)
Cypress (Cupressus sempervirens)
Datura metel
Datura suaveolens
Digitalis lutea
Dolichos lablab
Drug screening
Echinops sphaerocephalus
Eclipta alba
Elder (Sambucus nigra)
Elecampane (Inula helenium)
Ephedra nevadensis
Eryngium campestre
Erythrina crista-galli
Erythrina glabeliferus
Euptelea pleiosperma
Fagopyrum suffruticosum
Ficus triangularis
Flavor
Flax (Linum hirsutum)
Fractionation
Fungicides
Galium spurium
Genista tinctoria
Gentian (Gentiana tibetica)
**Ginkgo biloba**
Gnetum gnemon
Grape (Vitis labrusca)
Gratiola officinalis
HPLC
Hazel (Corylus avellana)
Heracleum pubescens
Herbicides
Horse chestnut (Aesculus hippocastanum)
Horse chestnut (Aesculus woerlitzensis)
Horseradish (Armoracia lapathifolia)
Hosta fortunei
Hosta lancifolia
Hosta sieboldii

Hydroponics
Hyoscyamus niger
Hyssopus seravschanicus
Insecticides
Ipomoea purpurea
Ipomoea tricolor
Iris pallida
Iris pseudacorus
Jacobinia
Kigelia pinnata
Laser trilobum
Laurus nobilis
**Leaf**
Leonurus sibiricus
Liatris spicata
Livistona chinensis
Loquat (Eriobotrya japonica)
Lupine (Lupinus luteus)
Lupine (Lupinus polyphyllus)
Macleaya cordata
Magnolia cobus
Matteuccia struthiopteris
Meadow rue (Thalictrum)
Meadow rue (Thalictrum flavum)
Meadow rue (Thalictrum minus)
Menispermum dauricum
Metrosideros excelsa
Murraya exotica
Oak (Quercus imbricaria)
Oak (Quercus nigra)
Oak (Quercus rubra)
Odor and Odorous substances
Oreopanax capitatus
Osmanthus fragrans
Ostrya carpinifolia
Ostrya connogea
Oxybaphus nyctagineus
Pachira affinis
Papaya (Carica papaya)
Peganum harmala
Peony (Paeonia daurica)
Peony (Paeonia lactiflora)
Peony (Paeonia suffruticosa)
Pepper (Piper cubeba)
Perfumes
Persimmon (Diospyros kaki)
Philodendron speciosum
Phoenix zeylanica
Phyllanthus grandifolius
Physalis creticola
Physalis ixocarpa
Pine (Pinus pinea)
Pithecellobium unguis-cati
Plant analysis
Podocarpus spinulosa
Podophyllum hexandrum
Polygonum aviculare
Polygonum latifolium
Portulaca oleracea
Pot marjoram
Potentilla alba
Poterium sanguisorba
Psychotria metbacterio-domasica

Psychotria nigropunctata
Pterygota alata
Rauvolfia caffra
Rhododendron
Root
Rose (Rosa multiflora)
Rue (Ruta graveolens)
Sanchezia nobilis
Schisandra chinensis
Scotch broom (Cytisus scoparius)
Scutellaria altissima
Scutellaria baicalensis
Scutellaria creticola
Sedum album
Sedum telephium
Selinum monnieri
Senecio platyphyllus
Senna (Cassia fasciculata)
Senna (Cassia hebecarpa)
Silk oak (Grevillea robusta)
Silybum marianum
**Solvent extraction**
Solvents
Sorbus aucuparia
Soybean (Glycine max)
St.-John's-wort (Hypericum perforatum)
Sweet clover (Melilotus medicaginoides)
Tamarind (Tamarindus indica)
Tarragon (Artemisia dracunculus)
Taxodium distichum
Tephrosia grandiflora
Tetraclinis articulata
Teucrium hamedris
Thermopsis fabacea
Thuja occidentalis
Thyme (Thymus cretaceus)
Trevesia sundaica
Trichosanthes kirilowii
Tulip tree
UV radiation
Veratrum nigrum
Vinca minor
Walnut (Juglans regia)
Willow (Salix babylonica)
Xanthium sibiricum
(identifying and recovering products exuded from plants)

IT Phosphatidic acids
Polyoxyalkylenes, uses
RL: NUU (Other use, unclassified); USES (Uses)
(identifying and recovering products exuded from plants)

IT Metabolism
(metabolites, solvent extraction of plant cuticular material containing; identifying and recovering products exuded from plants)

IT Aspergillus flavus
Bacteria (Eubacteria)
Fungi
Microorganism
Penicillium nigra
Pseudomonas aeruginosa
Saccharomyces cerevisiae
Staphylococcus aureus aureus
Virus
(response of; identifying and recovering products exuded from plants)

IT Lipids, analysis
Proteins, general, analysis
Waxes
RL: AMX (Analytical matrix); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(solvent extraction of plant cuticular material containing; identifying and recovering products exuded from plants)

IT Escherichia coli
(strain K-12.F, response of; identifying and recovering products exuded from plants)

IT 446-72-0P, Genistein 486-66-8P, Daidzein
RL: ANT (Analyte); BOC (Biological occurrence); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PUR (Purification or recovery); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
(HPLC separation of, from soybeans; identifying and recovering products exuded from plants)

IT 64-19-7, Acetic acid, biological studies 7761-88-8, Silver nitrate, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(as abiotic elicitor, for agent recovery from roots; identifying and recovering products exuded from plants)

IT 119-36-8, Methyl salicylate 1211-29-6, Methyl jasmonate 9012-76-4, Chitosan
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(as biotic elicitor, for agent recovery from roots; identifying and recovering products exuded from plants)

IT 54-11-5P, Nicotine 4569-98-6P, 5-O-Methyl-genistein
RL: BOC (Biological occurrence); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
(identifying and recovering products exuded from plants)

IT 50-81-7, L-Ascorbic acid, uses 67-66-3, Chloroform, uses 69-72-7, Salicylic acid, uses 70-18-8, Glutathione, uses 71-50-1, uses 75-09-2, Methylene chloride, uses 151-21-3, SDS, uses 303-07-1, 2,6-Dihydroxybenzoic acid 445-29-4, 2-Fluorobenzoic acid 506-32-1, Arachidonic acid 541-35-5, Butanamide 602-94-8, Pentafluorobenzoic acid 621-82-9, Cinnamic acid, uses 4685-14-7, Paraquat 6894-38-8, Jasmonic acid 7439-92-1, Lead, uses 7440-02-0, Nickel, uses 7440-50-8, Copper, uses 7681-49-4, Sodium fluoride, uses 7722-84-1, Hydrogen peroxide, uses 7732-18-5, Water, uses 9008-22-4, Laminarin 9046-38-2, Polygalacturonic acid 25249-06-3, Polygalacturonic acid 25322-68-3 26780-96-1, HSL 32839-30-8, Eicosapentaenoic acid 41034-18-8 78111-17-8, Okadaic acid 101932-71-2, Calyculin A 147852-83-3
RL: NUU (Other use, unclassified); USES (Uses)
(identifying and recovering products exuded from plants)

IT 54990-88-4, Cutin
RL: AMX (Analytical matrix); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(solvent extraction of plant cuticular material containing; identifying and recovering products exuded from plants)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Chakraborty; FOLIA Microbiol 1994, V39(5), P409 HCAPLUS
(2) Grieve, M; A Modern Herbal: The Medicinal, Culinary, Cosmetic And Economic Properties, Cultivation And Folklore Of Herbs, Grasses, Fungi, Shrubs And Trees With All Their Modern Scientific Uses 1996, P464
(3) Liu; Dokkyo Journal Of Medical Sciences 1995, V22(4), P253 HCAPLUS
(4) Stevens; Phytochemistry 1995, V39(4), P805 HCAPLUS
(5) Tyler, V; Herbs of Choice: the Therapeutic Use of Phytomedicinals 1994, P77

L46 ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:15604 HCAPLUS
DN 132:35038
ED Entered STN: 07 Jan 2000
TI Water-soluble native vegetable dried extract, in particular **Ginkgo biloba** extract with high content of **terpenoids** and **flavone glycosides**
IN **Oschmann, Rainer; Grethlein, Eckardt**
PA **Willmar Schwabe G.m.b.H. and Co., Germany**
SO Ger. Offen., 8 pp.
CODEN: GWXXBX
DT Patent
LA German
IC ICM A23L001-221
ICS A23L001-30; A61K035-78; A61K031-70; A61K031-365; A61K007-00
CC 17-6 (Food and Feed Chemistry)
Section cross-reference(s): 62, 63
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE | |
|---|---|---|---|---|---|---|
| PI | DE 19829516 | A1 | 20000105 | DE 1998-19829516 | 19980702 | <-- |
| | CA 2335148 | AA | 20000113 | CA 1999-2335148 | 19990619 | <-- |
| | WO 2000001397 | A1 | 20000113 | WO 1999-DE1812 | 19990619 | <-- |
| | W: AU, CA, JP, US | | | | | |
| | RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | | |
| | AU 9954069 | A1 | 20000124 | AU 1999-54069 | 19990619 | <-- |
| | AU 745660 | B2 | 20020328 | | | |
| | EP 1089748 | A1 | 20010411 | EP 1999-939923 | 19990619 | <-- |
| | EP 1089748 | B1 | 20030604 | | | |
| | R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL | | | | | |
| | JP 2002519383 | T2 | 20020702 | JP 2000-557843 | 19990619 | <-- |
| | AT 241995 | E | 20030615 | AT 1999-939923 | 19990619 | <-- |
| PRAI | DE 1998-19829516 | A | 19980702 | <-- | | |
| | WO 1999-DE1812 | W | 19990619 | <-- | | |

AB A water-soluble native vegetable dried extract from plant parts, especially from **Ginkgo biloba leaves**, contains **flavone glycosides**, **terpene lactones** and other components and is prepared from an **ultrafiltered** alc.-water extract preferably. The extract is used in dietetic foods, drugs and cosmetics.
ST Ginkgo **leaf** ext manuf **flavone glycoside terpenoid**
IT Food
(dietetic; water-soluble native vegetable dried extract, in particular **Ginkgo biloba** extract with high content of **terpenoids** and **flavone glycosides**)
IT **Glycosides**
RL: BUU (Biological use, unclassified); FFD (Food or feed use); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**flavonoid**, oxo; water-soluble native vegetable dried extract, in particular **Ginkgo biloba** extract with high content of **terpenoids** and **flavone glycosides**)
IT **Terpenes**, biological studies
RL: BUU (Biological use, unclassified); FFD (Food or feed use); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**lactones**; water-soluble native vegetable dried extract, in particular **Ginkgo biloba** extract with high content of **terpenoids** and **flavone glycosides**)
IT **Ginkgo biloba**

(**leaves**; water-soluble native vegetable dried extract, in particular **Ginkgo biloba** extract with high content of **terpenoids** and **flavone glycosides**)

IT Cosmetics
Drugs
Plant (Embryophyta)
**Ultrafiltration**
(water-soluble native vegetable dried extract, in particular **Ginkgo biloba** extract with high content of **terpenoids** and **flavone glycosides**)

IT **Terpenes**, biological studies
RL: BUU (Biological use, unclassified); FFD (Food or feed use); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(water-soluble native vegetable dried extract, in particular **Ginkgo biloba** extract with high content of **terpenoids** and **flavone glycosides**)

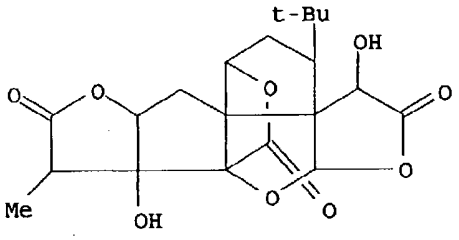
IT 9004-34-6, Cellulose, processes
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(regenerated, **ultrafiltration** with S 1Y3; water-soluble native vegetable dried extract, in particular **Ginkgo biloba** extract with high content of **terpenoids** and **flavone glycosides**)

IT **15291-75-5P, Ginkgolide** A **15291-76-6P, Ginkgolide** C **15291-77-7P, Ginkgolide** B
22910-60-7P, **Ginkgolic acid** 33570-04-6P, Bilobalide
RL: BUU (Biological use, unclassified); FFD (Food or feed use); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(water-soluble native vegetable dried extract, in particular **Ginkgo biloba** extract with high content of **terpenoids** and **flavone glycosides**)

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Anon; DE 19829516 A1 HCAPLUS

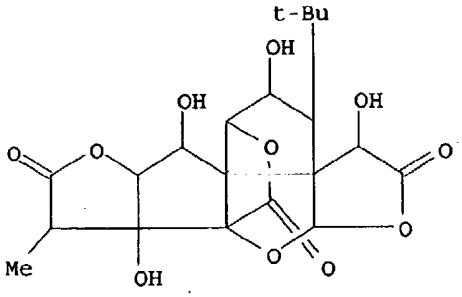
IT **15291-75-5P, Ginkgolide** A **15291-76-6P, Ginkgolide** C **15291-77-7P, Ginkgolide** B
RL: BUU (Biological use, unclassified); FFD (Food or feed use); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(water-soluble native vegetable dried extract, in particular **Ginkgo biloba** extract with high content of **terpenoids** and **flavone glycosides**)

RN 15291-75-5 HCAPLUS
CN 9H-1,7a-(Epoxymethano)-1H,6aH-cyclopenta[c]furo[2,3-b]furo[3',2':3,4]cyclopenta[1,2-d]furan-5,9,12(4H)-trione, 3-(1,1-dimethylethyl)hexahydro-4,7b-dihydroxy-8-methyl-, (1R,3S,3aS,4R,6aR,7aR,7bR,8S,10aS,11aS)- (9CI) (CA INDEX NAME)

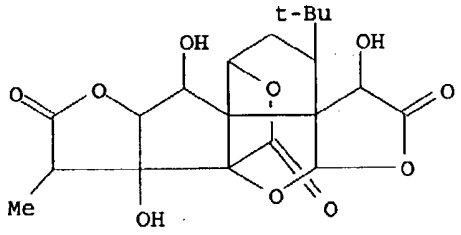



RN 15291-76-6 HCAPLUS
CN 9H-1,7a-(Epoxymethano)-1H,6aH-cyclopenta[c]furo[2,3-

b]furo[3',2':3,4]cyclopenta[1,2-d]furan-5,9,12(4H)-trione,
3-(1,1-dimethylethyl)hexahydro-2,4,7b,11-tetrahydroxy-8-methyl-,
(1S,2R,3S,3aS,4R,6aR,7aR,7bR,8S,10aS,11R,11aR)- (9CI) (CA INDEX NAME)




RN 15291-77-7 HCAPLUS
CN 9H-1,7a-(Epoxymethano)-1H,6aH-cyclopenta[c]furo[2,3-
b]furo[3',2':3,4]cyclopenta[1,2-d]furan-5,9,12(4H)-trione,
3-(1,1-dimethylethyl)hexahydro-4,7b,11-trihydroxy-8-methyl-,
(1R,3S,3aS,4R,6aR,7aR,7bR,8S,10aS,11R,11aR)- (9CI) (CA INDEX NAME)




L46 ANSWER 7 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1998:729675 HCAPLUS
DN 130:107142
ED Entered STN: 18 Nov 1998
TI Study on leaching technology of **flavonoids** from **Ginkgo biloba leaves**
AU Wang, Chengzhang; Yu, Qing; Chen, Xiang; Tan, Weihong; Shen, Zhaobang
CS Research Institute Chemical Processing & Utilization Forest Products, CAF, Nanjing, 210042, Peop. Rep. China
SO Tianran Chanwu Yanjiu Yu Kaifa (**1998**), 10(2), 66-70
CODEN: TCYKE5; ISSN: 1001-6880
PB Tianran Chanwu Yanjiu Yu Kaifa Bianjibu
DT Journal
LA Chinese
CC 9-9 (Biochemical Methods)
AB The extraction of lower contents of **flavonoids** from **Ginkgo biloba** L. was studied, leaching conditions were identified as leaching regent of 50% .apprx. 60% EtOH-H2O, the ratio of liquid to solid for 8:1.apprx.6:1, leaching temperation between 60.apprx.70° and leaching time for 3h and 1h, two times. The extractive ratio of **flavonoids** was over 85%. The extract of **Ginkgo biloba** which contained 26% .apprx. 31% **flavonoids** and had 1.6%.apprx.1.9% yields was prepared by the resins of A-1 and A-2. The technol. has been used in pilot production and has lower product cost.
ST leaching technol **flavonoid Ginkgo biloba leaf**

IT **Extraction**
**Ginkgo biloba**
Leaching
**Leaf**
(leaching technol. of **flavonoids** from **Ginkgo biloba leaves**)
IT **Flavonoids**
RL: PUR (Purification or recovery); PREP (Preparation)
(leaching technol. of **flavonoids** from **Ginkgo biloba leaves**)

L46 ANSWER 8 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1998:718286 HCAPLUS
DN 130:136067
ED Entered STN: 12 Nov 1998
TI Technology for extracting and purifying **flavones** from ginkgo **leaves**
AU Yang, Shengyuan; Liang, Zhiqun
CS Institute of Food Fermentation, Guangxi University, Nanning, 530004, Peop. Rep. China
SO Shipin Kexue (Beijing) (**1998**), 19(2), 24-25
CODEN: SPKHD5; ISSN: 1002-6630
PB Zhongguo Shipin Zazhishe
DT Journal
LA Chinese
CC 9-3 (Biochemical Methods)
Section cross-reference(s): 11
AB A technol. process for extraction of **flavones** from ginkgo **leaves** and its purification by absorbent resin was introduced.
ST ginkgo **leaf flavone** extn purifn
IT **Extraction**
(of **flavones**; technol. for extracting and purifying **flavones** from ginkgo **leaves**)
IT **Ginkgo biloba**
**Leaf**
(technol. for extracting and purifying **flavones** from ginkgo **leaves**)
IT **Flavones**
RL: PUR (Purification or recovery); PREP (Preparation)
(technol. for extracting and purifying **flavones** from ginkgo **leaves**)

L46 ANSWER 9 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1998:679858 HCAPLUS
DN 130:114793
ED Entered STN: 28 Oct 1998
TI Extraction of effective components from ginkgo **leaves** and their functions
AU Zeng, Youliang; Lu, Nanting; Zhou, Li
CS East China University of Technology, Shanghai, 200237, Peop. Rep. China
SO Shanghai Huagong (**1998**), 23(5), 39-42
CODEN: SHAHE2; ISSN: 1004-017X
PB Shanghai-shi Huaxue Gongyeju Kexue Jishu Qingbao Yanjiuso
DT Journal; General Review
LA Chinese
CC 63-0 (Pharmaceuticals)
Section cross-reference(s): 1
AB A review with 19 refs. to introduce the effective components of ginkgo **leaves**, their pharmacol. functions and their extraction from ginkgo **leaves** by bio-separation processes.
ST review ginkgo **leaf flavone ginkgolide** extn
IT Steroids, biological studies
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PEP

(Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PROC (Process); USES (Uses)
(cardenolide; extraction of effective components from ginkgo **leaves** and their functions)

IT **Extraction**
**Ginkgo**
(extraction of effective components from ginkgo **leaves** and their functions)

IT **Flavones**
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PROC (Process); USES (Uses)
(extraction of effective components from ginkgo **leaves** and their functions)

L46 ANSWER 10 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1998:257224 HCAPLUS
DN 129:51633
ED Entered STN: 07 May 1998
TI Design of some novel polymeric adsorbents with high selectivity based on hydrogen bonding
AU Xu, Mingcheng; Shi, Zuoqing; He, Binglin
CS Institute of Polymer Chemistry, Nankai University, Tianjin, 300071, Peop. Rep. China
SO International Conference on Biorelated Polymers Controlled Release Drugs and Reactive Polymers, Xi'an, Peop. Rep. China, May 8-11, 1997 (**1997**), 182-183 Publisher: Nankai University, Institute of Polymer Chemistry, Tianjin, Peop. Rep. China.
CODEN: 65XOAU
DT Conference
LA English
CC 9-16 (Biochemical Methods)
Section cross-reference(s): 17, 63
AB Three types of polymeric adsorbents with high selectivity based on hydrogen bonding were synthesized and used for the purification and extraction of
natural products. Glutaraldehyde crosslinked hybrides of PVA and gelatin were prepared by reversed-suspension polymerization and used to remove tannins from
Chinese herbal drugs. Macroporous spherical sorbents based on urea-formaldehyde copolymn. were used to purify **Ginkgo biloba** L. crude **leaf** extract; active ingredients **flavonol glycosides** and **terpene lactones** were at international standard levels. Macroporous p-hydroxylstyrene-divinylbenzene copolymer was the third adsorbent prepared and it was used to recover coffeine from tea extract
ST polymer adsorbent hydrogen bonding purifn extn; herbal drug tannin Ginkgo caffeine tea
IT Gelatins, processes
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(crosslinked, design of novel polymeric adsorbents with high selectivity based on hydrogen bonding)
IT Adsorbents
**Extraction**
**Ginkgo biloba**
Purification
Tea (Camellia sinensis)
(design of novel polymeric adsorbents with high selectivity based on hydrogen bonding)
IT Aminoplasts
Polymers, processes
Tannins
RL: PEP (Physical, engineering or chemical process); PROC (Process)

(design of novel polymeric adsorbents with high selectivity based on hydrogen bonding)
IT Natural products
RL: PUR (Purification or recovery); PREP (Preparation)
(design of novel polymeric adsorbents with high selectivity based on hydrogen bonding)
IT Natural products, pharmaceutical
RL: PUR (Purification or recovery); PREP (Preparation)
(design of novel polymeric adsorbents with high selectivity based on hydrogen bonding)
IT **Terpenes**, preparation
RL: PUR (Purification or recovery); PREP (Preparation)
(design of novel polymeric adsorbents with high selectivity based on hydrogen bonding)
IT **Glycosides**
RL: PUR (Purification or recovery); PREP (Preparation)
(**flavonoid**; design of novel polymeric adsorbents with high selectivity based on hydrogen bonding)
IT 9002-89-5, PVA
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(blends, design of novel polymeric adsorbents with high selectivity based on hydrogen bonding)
IT 58-08-2, processes 111-30-8D, Glutaraldehyde, crosslinked with PVA and gelatin 9011-05-6, Urea-formaldehyde copolymer 60280-86-6
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(design of novel polymeric adsorbents with high selectivity based on hydrogen bonding)
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD.
RE
(1) Christopher, T; J Am Chem Soc 1993, V115, P1321
(2) O'Reilly, J; Proc Phytochem Soc Eur 1993, V34, P253 HCAPLUS
(3) Ya, C; J Chem Soc Perkin Trans 1990, V2, P2197

L46 ANSWER 11 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1998:143903 HCAPLUS
DN 128:142679
ED Entered STN: 11 Mar 1998
TI Continuous solvent extraction of medicinal compounds from plants
IN Kuhn, Gerhard
PA Max Zeller Soehne Ag, Switz.
SO Patentschrift (Switz.), 7 pp.
CODEN: SWXXAS
DT Patent
LA German
IC ICM A61K035-78
ICS B01D011-00
CC 48-1 (Unit Operations and Processes)
Section cross-reference(s): 11, 62, 63
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | CH 688645 | A | 19971231 | CH 1995-1385 | 19950512 <-- |
| PRAI | CH 1995-1385 | | 19950512 <-- | | |

AB Mashed or sheared plant material is subjected to a preliminary extraction and then to a continuous extraction with alkanol or alkanol/water mixts. using a band filter. The installation comprises a unit for forming a mash from the plant material and a liquid medium, ≥2 apparatus for countercurrent distribution of solvent mixture onto the plant material on the band filter, and ≥2 collectors for recovery of the extract for further treatment. The plant materials can be from Allium sp., Ginkgo sp., Agnus castus fructus, Crataegus folium cum flores, Hedera helicis folium, **Ginkgo bilobae** folium, Passiflora herba, Crataegi fructus, Hyperici herba, Salicis cortex/herba or Petasitidis rhizoma. In

an example, 0.08-0.1 weight% hypericin was pre-extracted from 200 kg of ground St.-John's-wort using 50% ethanol at 50°C for 20 min and under cooling to 30°C for 20 min. After 4 h, the settled extracted material was separated on a vacuum band filter. The filter cake was re-extracted or washed in countercurrent flow.

ST plant medicinal compd continuous solvent extn; hypericin continuous solvent extn plant; drug continuous solvent extn plant

IT Alcohols, uses
RL: NUU (Other use, unclassified); USES (Uses)
(aliphatic; continuous solvent extraction of medicinal compds. from plants)

IT Filters
(belt filters; continuous solvent extraction of medicinal compds. from plants)

IT Allium
Drugs
**Ginkgo**
Hawthorn (Crataegus)
Passionflower (Passiflora)
Petasites
Plant (Embryophyta)
**Solvent extraction**
St.-John's-wort (Hypericum)
Willow (Salix)
(continuous solvent extraction of medicinal compds. from plants)

IT Natural products
RL: PUR (Purification or recovery); PREP (Preparation)
(continuous solvent extraction of medicinal compds. from plants)

IT Vitex agnus-castus
(fruits; continuous solvent extraction of medicinal compds. from plants)

IT **Ginkgo biloba**
Ivy (Hedera helix)
(**leaves**; continuous solvent extraction of medicinal compds. from plants)

IT Filters
(vacuum filters; continuous solvent extraction of medicinal compds. from plants)

IT 64-17-5, Ethanol, uses
RL: NUU (Other use, unclassified); USES (Uses)
(continuous solvent extraction of medicinal compds. from plants)

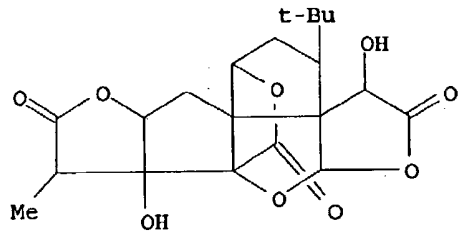
IT 548-04-9P, Hypericin
RL: PUR (Purification or recovery); PREP (Preparation)
(continuous solvent extraction of medicinal compds. from plants)

L46 ANSWER 12 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1998:113488 HCAPLUS
DN 128:172016
ED Entered STN: 26 Feb 1998
TI Study on optimum extraction process of **flavonoids** from **Ginkgo biloba** L
AU Hu, Min; Gan, Lu; Jiang, Fatang; Zhang, Shenghua
CS Dep. Food Sci., Huazhong Agric. Univ., Wuhan, 430070, Peop. Rep. China
SO Shipin Gongye Keji (**1997**), (5), 49-51
CODEN: SGOKE6; ISSN: 1002-0306
PB Shipin Gongye Keji Bianjibu
DT Journal
LA Chinese
CC 63-4 (Pharmaceuticals)
AB The optimum extracting conditions of **flavonoids** in **Ginkgo biloba** L. were investigated by using the orthogonal design. The results showed that 90°C, 9:1 of 70% ethanol to **Ginkgo biloba** L. weight ratio, for 4 times and 1h for each time were optimal. The average extraction rate was as high as 95.6%. The average recovery of

TI An improved method for extracting **flavone glycosides** from ginkgo **leaves**
AU Qiu, Guofu; Hu, Quanyuan; Li, Hong; Li, Chongching; Li, Jing
CS Basic Medical College, Hubei Medical Univ., Wuhan, 430071, Peop. Rep. China
SO Hubei Yike Daxue Xuebao (**1996**), 17(3), 205-206
CODEN: HYDXFU; ISSN: 1000-243X
PB Hubei Yike Daxue Xuebao Bianjibu
DT Journal
LA Chinese
CC 63-4 (Pharmaceuticals)
AB An improved method for extracting **flavones glycosides** from Ginkgo **leaves** is described. The method was used to remove chlorophyll and other aliphatic soluble impurities by using absorbent cotton absorption then cellulose pulp codeposition. The method was very effective, and the yield of **flavone glycosides** was 73%.
ST **flavone glycoside** extn Ginkgo
IT **Extraction**
**Ginkgo**
(extraction of **flavone glycosides** from Ginkgo **leaves**)
IT **Glycosides**
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PROC (Process); USES (Uses)
(**flavonoid**, oxo; extraction of **flavone glycosides** from Ginkgo **leaves**)
IT 9004-34-6, Cellulose, biological studies
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(extraction of **flavone glycosides** from Ginkgo **leaves**)

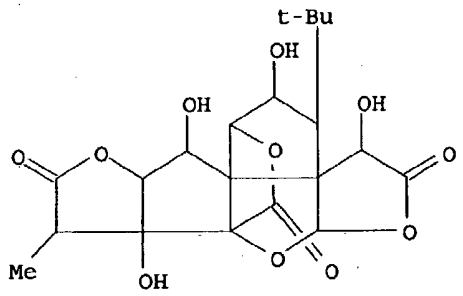
L46 ANSWER 15 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1996:436102 HCAPLUS
DN 125:95719
ED Entered STN: 24 Jul 1996
TI Sample preparation of standardized extracts of **Ginkgo biloba** by supercritical fluid extraction
AU van Beek, Teris A.; Taylor, Larry T.
CS Dep. Org. Chem., Agric. Univ., Wageningen, 6703 HB, Neth.
SO Phytochemical Analysis (**1996**), 7(4), 185-191
CODEN: PHANEL; ISSN: 0958-0344
PB Wiley
DT Journal
LA English
CC 63-4 (Pharmaceuticals)
AB A method of sample preparation of standardized exts. of **Ginkgo biloba** using supercrit. fluid extraction (SFE) is described. **Ginkgolides** and bilobalide could selectively extracted with carbon dioxide containing 10% methanol at 335 atm and 45°C from a methanolic solution of the extract An in-line **filter** of silica gel was found to be essential for obtaining clean samples. Trapping was carried out with a solid silica gel trap at 80°C. After eluting the trap with Me acetate, the sample could be analyzed by gas liquid chromatog. or high performance liquid chromatog. Recoveries of the five **terpenes** relative to a standard solid phase extraction (SPE) procedure varied for two different exts. from 98.6 to 102.3%. Relative standard deviations were better for SFE than for SPE. A further advantage for the SFE over the SPE method is that it is much less laborious. A disadvantage is that it requires an automated supercrit. extractor. With a small adaptation, the SFE method could also be used for finished ginkgo drugs in an aqueous alc. solution

ST ginkgo extn supercrit carbon dioxide
IT **Ginkgo biloba**
(use of supercrit. fluid extraction for the simultaneous extraction and purification
of standardized ginkgo exts.)
IT **Terpenes** and **Terpenoids**, biological studies
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process)
(use of supercrit. fluid extraction for the simultaneous extraction and purification
of standardized ginkgo exts.)
IT **Extraction**
(supercrit., use of supercrit. fluid extraction for the simultaneous extraction
and purification of standardized ginkgo exts.)
IT **15291-75-5, Ginkgolide** a **15291-76-6, Ginkgolide** C **15291-77-7, Ginkgolide** b
33570-04-6, Bilobalide **107438-79-9, Ginkgolide** J
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process)
(use of supercrit. fluid extraction for the simultaneous extraction and purification
of standardized ginkgo exts.)
IT 124-38-9, Carbon dioxide, biological studies
RL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(use of supercrit. fluid extraction for the simultaneous extraction and purification
of standardized ginkgo exts.)
IT **15291-75-5, Ginkgolide** a **15291-76-6, Ginkgolide** C **15291-77-7, Ginkgolide** b
**107438-79-9, Ginkgolide** J
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process)
(use of supercrit. fluid extraction for the simultaneous extraction and purification
of standardized ginkgo exts.)
RN 15291-75-5 HCAPLUS
CN 9H-1,7a-(Epoxymethano)-1H,6aH-cyclopenta[c]furo[2,3-b]furo[3',2':3,4]cyclopenta[1,2-d]furan-5,9,12(4H)-trione, 3-(1,1-dimethylethyl)hexahydro-4,7b-dihydroxy-8-methyl-, (1R,3S,3aS,4R,6aR,7aR,7bR,8S,10aS,11aS)- (9CI) (CA INDEX NAME)

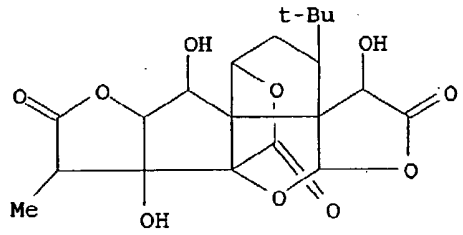



RN 15291-76-6 HCAPLUS
CN 9H-1,7a-(Epoxymethano)-1H,6aH-cyclopenta[c]furo[2,3-b]furo[3',2':3,4]cyclopenta[1,2-d]furan-5,9,12(4H)-trione, 3-(1,1-dimethylethyl)hexahydro-2,4,7b,11-tetrahydroxy-8-methyl-,

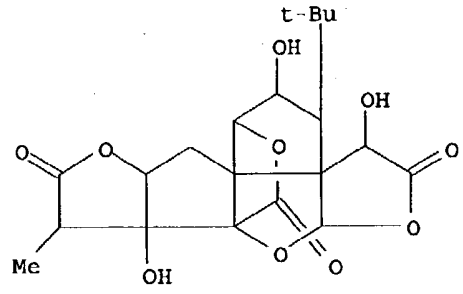
(1S,2R,3S,3aS,4R,6aR,7aR,7bR,8S,10aS,11R,11aR)- (9CI) (CA INDEX NAME)




RN 15291-77-7 HCAPLUS
CN 9H-1,7a-(Epoxymethano)-1H,6aH-cyclopenta[c]furo[2,3-b]furo[3',2':3,4]cyclopenta[1,2-d]furan-5,9,12(4H)-trione, 3-(1,1-dimethylethyl)hexahydro-4,7b,11-trihydroxy-8-methyl-, (1R,3S,3aS,4R,6aR,7aR,7bR,8S,10aS,11R,11aR)- (9CI) (CA INDEX NAME)




RN 107438-79-9 HCAPLUS
CN 9H-1,7a-(Epoxymethano)-1H,6aH-cyclopenta[c]furo[2,3-b]furo[3',2':3,4]cyclopenta[1,2-d]furan-5,9,12(4H)-trione, 3-(1,1-dimethylethyl)hexahydro-2,4,7b-trihydroxy-8-methyl-, (1S,2R,3S,3aS,4R,6aR,7aR,7bR,8S,10aS,11aS)- (9CI) (CA INDEX NAME)




L46 ANSWER 16 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1990:429238 HCAPLUS
DN 113:29238
ED Entered STN: 21 Jul 1990
TI Extract from **Ginkgo biloba leaves** as circulatory drugs
IN Ayroles, Georges; Rossard, Rene Marc; Cadiou, Michel
PA Fabre, Pierre, Industrie, Fr.

SO Eur. Pat. Appl., 4 pp.
CODEN: EPXXDW
DT Patent
LA French
IC ICM A61K035-78
CC 63-4 (Pharmaceuticals)
Section cross-reference(s): 11
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE | |
|---|---|---|---|---|---|---|
| PI | EP 330567 | A1 | 19890830 | EP 1989-400495 | 19890222 | <-- |
| | EP 330567 | B1 | 19911023 | | | |
| | R: AT, BE, CH, DE, ES, GB, GR, IT, LI, LU, NL, SE | | | | | |
| | FR 2627387 | A1 | 19890825 | FR 1988-2227 | 19880224 | <-- |
| | FR 2627387 | B1 | 19920605 | | | |
| | US 4981688 | A | 19910101 | US 1989-313372 | 19890221 | <-- |
| | AT 68701 | E | 19911115 | AT 1989-400495 | 19890222 | <-- |
| | JP 01258626 | A2 | 19891016 | JP 1989-45027 | 19890223 | <-- |
| PRAI | FR 1988-2227 | | 19880224 | <-- | | |
| | EP 1989-400495 | | 19890222 | <-- | | |

AB An extract is prepared of **Ginkgo biloba leaves**, usable as a drug for treatment of circulatory disturbances. The extract contains only low amts. of the toxic proanthrocyanidins. An aqueous acetone extract of G. biloba **leaves** was concentrated in vacuum. The precipitate was removed and supernatant was adjusted to pH 9 [Ca(OH)2], followed by **filtration** and acidification of the **filtrate** to ph 2. The **filtrate** was extracted with butanone-acetone (70:30) in the presence of (NH4)2SO4, followed by **filtration**, concentration of the **filtrate**, dissoln. of the residue in EtOH, **filtration**, and concentration, to give a product comprising 25.5% **flavone** glucosides and 6.6% quercetine + kaempferol.
ST Ginkgo ext circulatory disorder; **flavone** glucoside Ginkgo ext
IT **Ginkgo biloba**
(extract, **flavone glycosides** from, as circulatory drug)
IT Cardiovascular agents
(**flavone glycosides** from **Ginkgo biloba** extract as)
IT **Glycosides**
RL: BIOL (Biological study)
(**flavonoid**, oxo, **Ginkgo biloba** extract containing, as circulatory drug)
IT 117-39-5, Quercetine 520-18-3, Kaempferol
RL: BIOL (Biological study)
(**Ginkgo biloba** extract containing, as circulatory drug)

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FILE LAST UPDATED: 21 APR 2004 <20040421/UP>
MOST RECENT DERWENT UPDATE: 200426 <200426/DW>
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=> d all abeq tech abex tot

L83 ANSWER 1 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2004-099775 [11] WPIX
DNC C2004-041463
TI Compound medicine of **ginkgo leaf** extract and dipyridamole and its preparation method.
DC B02 B04
IN ZHANG, Z
PA (ZHAN-I) ZHANG Z
CYC 1
PI CN 1454596 A 20031112 (200411)* A61K031-519
ADT CN 1454596 A CN 2003-137926 20030530
PRAI CN 2003-137926 20030530
IC ICM A61K031-519
ICS A61P007-02; A61P009-10
AB CN 1454596 A UPAB: 20040213
NOVELTY - The invention is a manufacturing method for vein medicament of **gingko leaves** extraction materials and dipyridamole compound. It is based on the stability of **gingko flavone** in low viscosity aqueous solution is higher than in high thickness aqueous solution, the **gingko leaves** extraction materials and dipyridamole is dissolved at the same time, after the two are frozen and dried into even solid, the stability of **gingko flavone** is higher than the solid which is only frozen and dried from itself, and produces the infusion agent and powder pin agent. The manufacturing process doesn't use active carbon, but uses middle hole fiber film **filtering** new technology to wipe off impurities, enhances the quality of the product. The method is simple, convenient, and good curative effect.
Dwg.0/0
FS CPI
FA AB
MC CPI: B04-A08C2; **B04-A10**; B06-D09; B14-F02

L83 ANSWER 2 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2003-683080 [65] WPIX
DNC C2003-187078
TI Therapeutic agent comprises **ginkgo leaf** extract as an active ingredient for treating cerebral infarction and resulting disorders, e.g. sensory disturbance.
DC B04
PA (MORI-I) MORIMASA T; (TOKI-N) TOKIWA SHOKUBUTSU KAGAKU KK
CYC 1
PI JP 2003095966 A 20030403 (200365)* 7p A61K035-78 <--
ADT JP 2003095966 A JP 2001-296314 20010927
PRAI JP 2001-296314 20010927

IC ICM **A61K035-78**
ICS **A61K031-365**; A61K031-7048; A61P025-28
AB JP2003095966 A UPAB: 20031009
NOVELTY - Cerebral infarction therapeutic agent comprising **ginkgo leaf** extract as an active ingredient, is new.
ACTIVITY - Cerebroprotective; Nootropic. No biological data given.
MECHANISM OF ACTION - None given.
USE - The extract is used for treating cerebral infarction and resulting disorders, e.g. consciousness disturbance, movement disorders, logopathy, aphasia, emotional disturbance, dyslogia, sensory disturbance, memory defects and abnormal postures (claimed).
ADVANTAGE - The therapeutic agent is safe at the time of administering orally for a long period of time and effectively treats cerebral infarction in a patient.
Dwg.0/0
FS CPI
FA AB; DCN
MC CPI: **B04-A08**; **B04-A10B**; B14-J01
TECH UPTX: 20031009
TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Composition: The extract contains 24-28 % of total **flavone** glycoside, 5.5-10 % of total terpene **lactone** and less than 1 parts per million (ppm) of **ginkgol**-acid content..
ABEX UPTX: 20031009
ADMINISTRATION - 50-3000 (100-2000) mg/kg of **ginkgo leaf** extract is administered orally.

EXAMPLE - 1 kg of dried **ginkgo leaf** was ground, extracted with ethanol and **filtered** to obtain clean liquid. The liquid was concentrated at reduced pressure to remove active substances. The substance was washed with water and eluted by hydrated ethanol, to obtain 20 g of dried **ginkgo leaf** extract. The extract was found to have 6-8 % of terpene **lactone** content and 16-24 % of **flavone** glycoside content.

L83 ANSWER 3 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2003-495178 [47] WPIX
DNC C2003-132635
TI Preparation of medicinal **Ginkgo biloba** extracts, useful for e.g. treating hypertension or amnesia, comprises adsorbing organic or aqueous extract of plant **leaves** on phenol-containing resin and eluting with organic solvent.
DC B04
IN ALAQUI ISMAILI, S; GRANOLLERAS CASTELLO, A; RULL PROUS, S
PA (COGN-N) COGNIS IBERIA SL
CYC 26
PI EP 1314433 A1 20030528 (200347)* DE 6p A61K035-78 <--
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
ADT EP 1314433 A1 EP 2001-127914 20011123
PRAI EP 2001-127914 20011123
IC ICM **A61K035-78**
AB EP 1314433 A UPAB: 20030723
NOVELTY - Preparation of **Ginkgo biloba** extracts (I) comprises:
(1) extracting the **leaves** with organic or aqueous organic solvents;
(2) absorbing the **ginkgo flavonoids**, **ginkgolides** and **bilobalides** on resins; and
(3) desorbing with organic solvents.
The adsorbent is a phenol-containing resin.
ACTIVITY - Antiinflammatory; Auditory; Nootropic; Antianginal; Dermatological; Analgesic; Hypotensive.

MECHANISM OF ACTION - None given.

USE - (I) are traditional Asian herbal medicaments effective e.g. against respiratory disorders, hearing deficiency, hypertension, amnesia, angina pectoris, skin rashes and gastric pain.

ADVANTAGE - The use of phenol-containing resin adsorbents markedly increases the yield of **ginkgo flavonoids**, **ginkgolides** and **bilobalides**, i.e. the three major classes of active agents in **Ginkgo biloba** extracts. (I) is almost completely free of (undesirable) **ginkgo** acids. (I) specifically contains at least 24 weight% **ginkgo flavonoids**, 2.0-8.0 weight% of each of **ginkgolides** and **bilobalides** and less than 10 ppm **ginkgo** acids (all claimed).

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: B04-A08C1; **B04-A10**; B14-C01; B14-F01D; B14-F02B; B14-J01A4; B14-K01; B14-N04; B14-N17

TECH UPTX: 20030723

TECHNOLOGY FOCUS - POLYMERS - Preferred Materials: The phenol-containing resin is Duolite S 761 (RTM).

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Process: The process involves:
(a) extracting the **leaves** of **Ginkgo biloba** with aqueous organic solvent (preferably aqueous acetone or methanol);
(b) removing the organic solvent from the obtained first extract;
(c) subjecting the obtained first concentrate to liquid-liquid extraction with an aliphatic hydrocarbon (preferably 5-7C alkane);
(d) taking up the obtained second extract in an alcoholic solvent (preferably methanol or ethanol);
(e) supplying the obtained alcoholic solution to a column packed with phenol-containing resin;
(f) discarding the eluate and eluting the **flavonoids**, **ginkgolides** and **bilobalides** adsorbed on the column material with aqueous alcoholic solvent (preferably aqueous methanol); and
(g) removing the organic solvent from the eluate and drying.

ABEX UPTX: 20030723

EXAMPLE - Chopped **leaves** of **Ginkgo biloba** (1000 g) was extracted at 20 degrees C with aqueous acetone (50/50) (50 l) for 6 hours. Acetone was removed from the obtained first extract, followed by **filtration** and liquid-liquid extraction with hexane (to remove **ginkgo** acids). The obtained second extract was treated with methanol to give an alcohol concentration of 20 weight%. The obtained methanolic solution was subjected to column chromatography on various resins, the absorbed active agents (i.e. **ginkgo flavonoids**, **ginkgolides** and **bilobalides**) being desorbed with 90 weight% aqueous methanol and the eluate being evaporated and dried. Using Duolite S-761 (RTM; phenol-containing resin) as adsorbent, the active agent content was 28% after elution and 25% in the final product. For comparison, using Purasorb AP250 (RTM) as adsorbent the active agent content was 15% after elution and 11% in the final product and using Macronet MN 150(RTM) 24% after elution and 21% in the final product

L83 ANSWER 4 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2003-486260 [46] WPIX

CR 1995-228625 [30]

DNC C2003-130617

TI **Ginkgo** extract used as pharmaceutical and food additive, contains **flavone** glycoside, quercetin and salicylic acid derivatives.

DC B04

PA (DAIL) DAICEL CHEM IND LTD

CYC 1
PI JP 2003012528 A 20030115 (200346)* 13p A61K035-78 <--
ADT JP 2003012528 A Div ex JP 1993-307158 19931112, JP 2002-122968 19931112
PRAI JP 1993-307158 19931112; JP 2002-122968 19931112
IC ICM **A61K035-78**
ICS A23L001-30; A61K007-00; A61K007-48; A61P003-10; A61P009-00; A61P009-10; A61P025-18; A61P025-28
AB JP2003012528 A UPAB: 20030719
NOVELTY - **Ginkgo** extract contains 15 weight% of at least one **flavone** glycoside, upto 0.02 weight% quercetin and upto 30 ppm salicylic acid derivatives.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for manufacture of the **ginkgo** extract which comprises extracting **ginkgo leaves** are extracted with aqueous solvent which contains 0-15 volume% alcohol. The obtained extract is treated with an adsorbent. The adsorbed components are eluted and the eluate is concentrated.
USE - Used as pharmaceuticals and additives for foodstuff such as confectionery e.g. candy, chocolate, gum, health drink and tea.
ADVANTAGE - The simple method produces highly safe **ginkgo** extract having low content of salicylic acid derivative and quercetin, at high yield. By concentrating the eluate in an inert gas atmosphere, quercetin and/or coloring component in the **ginkgo** extract can be reduced.
Dwg.0/1
FS CPI
FA AB; DCN
MC CPI: B04-A08C2; **B04-A09**; **B04-A10**; B06-A01; **B11-B**; B14-E11
TECH UPTX: 20030719
TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Product: **Ginkgo** extract comprises at least 15 (preferably at least) 30 wt.% **flavone** glycoside, upto 0.01 wt.% quercetin and upto 10 (preferably upto 1) ppm salicylic acid derivatives.
Preferred Process: The **ginkgo leaves** are extracted at a pH of above 9.5, preferably 10. The extract is processed with a hydrophobic synthetic resin absorbent in acidic conditions. The components adsorbed to the adsorbent are eluted by upto 55 vol.% aqueous alcohol solution. The eluate is adjusted to pH 6-8 and concentrated at upto 80degreesC in an inert gas atmosphere. The alcohol is 1-3C monohydric alcohol.
ABEX UPTX: 20030719
EXAMPLE - 2000 ml of water was added to 150 g of **ginkgo leaves**, extracted at 90degreesC for 3 hours and scum was collected by **filtration.** 1000 ml of water was added to the scum and extracted at 90degreesC for 1.5 hours and **filtered.** 15 g of celite was added to the **filtrate**, stirred and again **filtered.** 15 ml of Amberlite XAD-2000 (RTM: hydrophobic synthetic resin absorbent) was added and equilibrated with water. 440 ml of the **filtrate**, obtained by celite **filtration** was passed through a column at a space velocity of 2 hr-1 for adsorption. The column was washed with 75 ml of water and 75 ml of 20 volume% aqueous ethanol solution, then eluted with 75 ml of 40 volume% aqueous ethanol solution. The eluate was concentration dried at 40-50degreesC and 320 mg of **ginkgo** extract was obtained. The extract contained 17.8 weight% of **flavone** glycoside, 0.001 weight% of quercetin and 1 ppm of salicylic acid derivative.

L83 ANSWER 5 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2003-457342 [43] WPIX
DNC C2003-121721
TI Extraction of biological active compound from botanical material, e.g. ginseng, black cohosh or green tea, comprises mixing together a botanical

material, and a solution with at least one antioxidant.

DC B04 D13
IN GREENE, J B
PA (BRIG-N) BRIGHTWATER HORTICULTURE LTD
CYC 101
PI WO 2003037096 A1 20030508 (200343)* EN 12p A23F003-16
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
ADT WO 2003037096 A1 WO 2002-NZ230 20021031
PRAI NZ 2001-515182 20011031
IC ICM A23F003-16
ICS A23F003-18; C07B063-00; C07C039-19; C07C039-21; C07C057-42; C07C059-52; C07G017-00
AB WO2003037096 A UPAB: 20030707
NOVELTY - Extraction of biologically active compounds from botanical material, comprises mixing together:
(1) a botanical material; and
(2) a solution containing at least one acid and at least one antioxidant.
The combination of acid and antioxidant prevents oxidative degradation of compounds in the mixture.
USE - The method is used for extracting biologically active compounds from botanical material (claimed).
ADVANTAGE - The combination of the acid and the antioxidant prevents, slows and/or halts oxidative degradation of compounds in the mixture. The solution prevents, slows and/or halts polyphenolic oxidative reaction in the mixture and reverses the polyphenolic oxidative reaction equilibrium.
The method prevents, slows or stops oxidative degeneration of the biologically active compounds and is cost-effective.
Dwg.0/0
FS CPI
FA AB; DCN
MC CPI: B03-F; B03-H; **B04-A08**; **B04-A09**; **B04-A10** ; B05-C05; B10-B02D; B10-C02; B10-C04; B10-E02; **B11-B**; D03-H
TECH UPTX: 20030707
TECHNOLOGY FOCUS - BIOLOGY - Preferred Method: The method further involves:
(1) disintegrating the botanical material;
(2) separating the liquid from the residue;
(3) drying the liquid extract to obtain a solid extract; and
(4) pressing the residual plant material to obtain a pressate, which is then combined with the liquid extract, **filtrate** and pressate drying.
The solution is added to the botanical material by spraying, dipping and/or pouring over. The mixing occurs immediately before harvest of the plant material. The disintegration occurs within less than 5 minutes (preferably less than 10 seconds) after mixing or simultaneously with mixing.
The separation is completed at any time between immediately or 7 days after mixing. The separation is by **filtration**, super critical fluid extraction, and/or mechanical dewatering (preferably **filtration**, and/or mechanical dewatering). The separation is completed by collecting a liquid extract as the retenate osmosis, collecting a liquid extract as retenate of **ultra-filtration**, and/or collecting a liquid extract as retenate.
The combination steps are conducted in the absence of oxygen. The method is performed in a nitrogen atmosphere. The phenolic level after extraction

is maintained at 50-100 (preferably 70-100)% as compared with the starting level, measured as dried extract.
Preferred Components: The botanical material is:
(1) Echinacea, **Ginkgo biloba**, kava kava, ginseng, black cohosh, green tea, St John's Wort (with hypercerin as an active), artichoke, chamomile, dong quai, grape seed, grape skins, hawthorn, hops, passion flower, pine bark, red clover, olive **leaf**, currants, and/or berries;
(2) leafy portion of plant, free of stems and branches and/or twigs; or
(3) by product or pressate of other plant processing/extraction steps or by product of seed extraction, super critical fluid extraction or by product of flower harvesting.
The plant material is prone to oxidative reactions that reduce the activity of the biologically active material.
The solution is food grade quality.
The botanical material is disintegrated fresh or frozen material. The botanical material is disintegrated to 0.1 - 50 mm in length.
TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Components: The solution is citric acid (0.5-30 weight.% (wt.%)), ascorbic acid (0.5-30 wt.%), cysteine, cinnamic acid, sulfur dioxide and/or vitamin E and water that has been deoxygenated and/or chilled to 1-4 degrees C. The solution includes hexylresorcinol.
The product is a mixture, extract, residue, or solid.

ABEX UPTX: 20030707
EXAMPLE - Frozen E. purpurea (10 kg) were sprayed with citric acid (a) (33.3 mM) or a combination (b) of citric acid (33.3 mM)+ascorbic acid (50 mM). Water (19 l) was added to the mixture and allowed to stand with occasional stirring for about 2 hours. A water extraction method was used as a control. The plant slurry contained dry plant material (6.3%). The final pH of the extract was 3.6 - 4. The extracts were tested for extract yield and phenolic in extract.
The extract yield for water (control), (a) and (b) was 35, 46 and 60% respectively. The phenolic in extract (weight%) for water (control), (a), and (b) in caftaric/cichoric/total were 0.03/0.06/0.09, 0.9/1/1.9 and 1.6/3.4/4/9 respectively.

L83 ANSWER 6 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2003-451775 [43] WPIX
DNC C2003-120540
TI **Ginkgo leaf** extract useful in foodstuffs, cosmetics, pharmaceuticals etc., has preset absorbence in specific wavelength.
DC B04 D13 D21
PA (TAMA-N) TAMA SEIKAGAKU KK
CYC 1
PI JP 2003026533 A 20030129 (200343)* 6p A61K007-00
ADT JP 2003026533 A JP 2001-213945 20010713
PRAI JP 2001-213945 20010713
IC ICM A61K007-00
ICS A23L001-30; **A61K035-78**
AB JP2003026533 A UPAB: 20030707
NOVELTY - A **ginkgo leaf** extract has an absorbence of 0.04 % or less at 540 nm wavelength.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for preparation of **ginkgo leaf** extract which involves extracting **ginkgo leaf** using an inorganic coagulant/flocculant
USE - Useful in foodstuffs, cosmetics, health drinks, pharmaceuticals, etc.
ADVANTAGE - The **ginkgo leaf** extract exhibiting improved color tone and aqueous solubility is effectively utilized in foodstuffs, cosmetics, health drinks and pharmaceuticals.
Dwg.0/1
FS CPI

FA AB; DCN
MC CPI: B04-A08C2; **B04-A09A**; **B04-A10B**; **B11-B**;
B12-M07; D03-H01F; D03-H01T2; D08-B
TECH UPTX: 20030707
TECHNOLOGY FOCUS - BIOLOGY - Preferred Method: Preparation of **ginkgo leaf** extract involves treating **ginkgo leaves** with inorganic coagulant/flocculant followed by purifying with hydrophobic suction/adsorption resin.

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Component: The inorganic coagulant/flocculent is aluminum sulfate and slaked lime.
ABEX UPTX: 20030707
EXAMPLE - Dried **ginkgo leaves** (500 g) were ground to 5-10 mm size and extracted with 20 volume% (volume%) acetone (5 l), for 2 hours, to obtain an extract (3 l). Subsequently, the residue were extracted twice with 20 volume% acetone, to obtain extract (13 l). The obtained extracts were distilled under normal pressure, the distillate was mixed with 23 volume% acetone and treated with hexane (0.5 l). The aqueous layer was further distilled with the solvent. The distilled residue was cooled and **filtered**. The **filtrate** was mixed with slaked lime (4 g) and water to form a slurry. The slurry was adjusted to pH 5, mixed with aluminum sulfate (0.7 g) and sedimented, to obtain a dark brown condensate and a supernatant pale yellow color liquid. The condensate was separated by **filtration**. The **filtrate** was passed through a porous hydrophobic resin column and eluted with 20 volume% ethanol. The eluate was then spray dried, to obtain yellow powdered **ginkgo leaf** extract (15 g). The powder contained 24 % of **flavone** glycoside and 9 % of terpenes, and had color tone of 0.0237 at 540 nm.

L83 ANSWER 7 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2003-439090 [41] WPIX
CR 2003-221652 [21]
DNC C2003-116261
TI Method of isolating terpene **trilactones** useful in the treatment of e.g. dementia, comprises suspending **Ginkgo biloba** plant material in an oxidation reagent or water, followed by extraction and separation.
DC B05
IN BERGER, J; BEROVA, N; LICHTBLAU, D; NAKANISHI, K
PA (UYCO) UNIV COLUMBIA NEW YORK
CYC 1
PI US 2003031736 A1 20030213 (200341)* 17p C07D311-78
US 6590109 B2 20030708 (200353) C07D307-93
ADT US 2003031736 A1 CIP of US 2001-903049 20010711, US 2002-194089 20020711; US 6590109 B2 CIP of US 2001-903049 20010711, US 2002-194089 20020711
PRAI US 2002-194089 20020711; US 2001-903049 20010711
IC ICM C07D307-93; C07D311-78
ICS **A61K035-78**; C07D407-14; C07D498-14
AB US2003031736 A UPAB: 20030820
NOVELTY - Method of isolating terpene **trilactones** (I) from **Ginkgo biloba** plant material or extract comprises:
(a) suspending the plant material or extract in either an oxidation reagent (a1) or water;
(b) extracting the terpene **trilactones** with an agent (b1); and
(c) separating the organic layer containing (I) from the aqueous layer.
ACTIVITY - Nootropic; Cerebroprotective; Auditory; Vasotropic; Antiasthmatic.
MECHANISM OF ACTION - Platelet Activating Factor Inhibitor.
USE - For the isolation of terpene **trilactones** (claimed), which is useful in the treatment of dementia, cerebral insufficiency,

polyuria and tinitus; for improving blood flow; vaso-protection; radical scavenging; as food supplement and energy pills; homeopathic uses; juices; cosmetics; various tea preparations; for increasing short-term memory; and as antiasthmatic.

ADVANTAGE - The terpene **trilactones** are obtained in high purity and high yield (more than 50 weight%). The process is simple reducing the extraction period from several days to one day and gives high recovery (at least 10 fold higher) than the prior art. The purification by reverse phase chromatography reduces unwanted levels of **ginkgolic** acid.

Dwg.0/7

FS CPI

FA AB; DCN

MC CPI: B04-A08C2; **B04-A10B**; B06-A03; **B11-B**; B14-F02; B14-J01A4; B14-K01A; B14-L06; B14-N02; B14-N16; B14-S08

TECH UPTX: 20030630

TECHNOLOGY FOCUS - BIOLOGY - Preferred Process: The method additionally involves:

(A) two washing steps to wash the organic layer with an aqueous salt or hydroxide solution (S1). (S1) used in both the washing steps are different;

(B) destroying excess (a1) in the organic layer by treating with a catalyst;

(C) drying the organic layer;

(D) recrystallizing the resulting dried extract; and

(E) purifying the isolated (I) by reversed phase chromatography.

In step (A) the pH of the suspended plant material or extract is adjusted to pH of 4-6.5 by addition of an acid (a2) and then the suspended plant material or extract is heated for 5 minutes - 5 hours.

In step (A) if the plant material or extract is suspended in water, then step (C) is performed by addition of sodium chloride to the emulsion containing organic and aqueous layers.

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Components: (b1) is lower acetate, lower ketone, lower ether, lower alcohol and benzene.

(a2) used in the aqueous solution of (a1) is acetic acid.

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Components: (a1) (preferably hydrogen peroxide) is in aqueous solution.

The aqueous solution contains 0.1-50 (preferably 0.1-15) % of (a1).

The aqueous solution additionally comprises (%): (a2) (0.1-15) selected from hydrochloric acid, nitric acid, phosphoric acid and sulfuric acid.

(S1) is an aqueous alkali salt solution selected from ammonium chloride, sodium carbonate, sodium bicarbonate, potassium carbonate, sodium hydroxide, potassium hydroxide, sodium thiosulfate, sodium sulfite and sodium hydrosulfide (preferably either sodium thiosulfate, sodium sulfite and sodium hydrosulfide or sodium hydroxide and potassium hydroxide).

(S1) has a pH of 7-14 (preferably 7.5-9.5).

ABEX UPTX: 20030630

EXAMPLE - Dried **leaves** (250 g) of **Ginkgo biloba** were suspended in hydrogen peroxide (5%, 2l) and boiled for 1 hour. The suspension was **filtered** and the **filtrate** was then extracted with 2 portions of ethyl acetate (250 ml and 125 ml). The organic layer was washed with saturated aqueous (aqueous) sodium carbonate solution, saturated (aqueous) sodium sulfite solution, water and sodium chloride solution sequentially. The organic layer was dried over sodium sulfate to give powder (830 mg) containing terpene **trilactone** (52%).

L83 ANSWER 8 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2003-221652 [21] WPIX

CR 2003-439090 [41]

DNC C2003-056419

TI Isolation of terpene **trilactones** from **Ginkgo**

**biloba** plant material involves suspending the plant material in the presence of an oxidation reagent, extracting, and separating the organic layer from the aqueous layer.

DC B02 B04
IN BERGER, J; BEROVA, N; LITCHBLAU, D A; NAKANISHI, K
PA (UYCO) UNIV COLUMBIA NEW YORK
CYC 100
PI WO 2003006040 A1 20030123 (200321)* EN 45p A61K035-78 <--
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW
ADT WO 2003006040 A1 WO 2002-US22101 20020711
PRAI US 2001-903049 20010711
IC ICM **A61K035-78**
ICS C07D307-77
AB WO2003006040 A UPAB: 20030630
NOVELTY - Isolation of terpene **trilactones** from **Ginkgo biloba** plant material or extract involves:

(a) suspending the plant material or extract in the presence of an oxidation reagent;

(b) extracting the terpene **trilactones** using an extraction agent; and

(c) separating the organic layer from the aqueous layer to isolate the terpene **trilactones** in the organic layer.

USE - To prepare terpene **trilactones** (claimed)

ADVANTAGE - The method is simple extraction procedure for producing a terpene **trilactones** concentration that is 10-fold higher. The method can be produced on industrial scale. The method is efficient and economical and provides the extraordinary stability, despite the presence of multiple oxygen functions, of the terpene **trilactones** structure to a variety of chemical treatments, especially oxidation. The method reduces the level of **ginkgolic** acid to an amount of less than 10 ppm.

Dwg.2/7

FS CPI
FA AB; GI; DCN
MC CPI: B04-A08C2; **B04-A10**; B06-A03
TECH UPTX: 20030328

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Method: The method further involves at least a first and a second washing step to wash the organic layer with an aqueous salt or hydroxide solution; destroying excess oxidation reagent in the organic layer by contacting the organic layer with a metal or a non-metal catalyst; drying the organic layer to form an extract containing terpene **trilactones**; and recrystallizing the extract to obtain terpene **trilactones** in higher purity. The second washing step is performed with a solution that is different from the solution used in the first washing step. The extract contains terpene **trilactones** (more than 50 wt.%). The method also further involves heating or boiling the suspended plant material or extract in aqueous solution for 5 minutes - 5 hours; and adjusting the pH of the suspended plant material or extract in aqueous solution to 4 - 6.5. The isolated terpene **trilactones** can also purified by reverse phase chromatography.

Preferred Components: The extraction agent is lower acetate, lower ketone, lower ether, lower alcohol or benzene.

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Components: The oxidation reagent is in aqueous solution. The oxidation reagent is hydrogen peroxide. The aqueous solution comprises (%) oxidation reagent

(0.1 - 50, preferably 0.1 - 30, especially 3 - 5) and further comprises an acid (0.1 - 15 %) selected from acetic acid, hydrochloric acid, nitric acid, phosphoric acid or sulfuric acid. A solution of salt or hydroxide is an aqueous alkali salt solution or is ammonium chloride, sodium carbonate, sodium bicarbonate, potassium carbonate, sodium hydroxide, potassium hydroxide, sodium thiosulfate, sodium sulfite and sodium hydrosulfide (preferably sodium thiosulfate, sodium sulfite or sodium hydrosulfide). The aqueous alkali salt or hydroxide solution has a pH of 7 - 14 (preferably 7.5 - 9.5, especially 8.3 - 9.3) and is an aqueous solution of hydroxide solution selected from sodium hydroxide solution and potassium hydroxide solution.

ABEX UPTX: 20030328

EXAMPLE - Pharmaceutical extract powder from **Ginkgo biloba** (25 g) was suspended in 5 % hydrogen peroxide aqueous solution (500 ml), containing additional 1 % of sulfuric acid and boiled for 15 minutes. The suspension was **filtered**, cooled to room temperature, the **filtrate** was extracted first with ethyl acetate (250 ml) and then with ethyl acetate (125 ml). The organic layer was separated and washed with saturated aqueous solution of sodium bicarbonate, a saturated aqueous solution of sodium sulfite, water and sodium chloride solution. The organic layer was dried over sodium sulfate and the solvent removed to obtain terpene **trilactone** (70 %).

L83 ANSWER 9 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2003-154274 [15] WPIX
DNC C2003-039898
TI Extract of **ginkgo biloba leaves** having antibacterial activity contains specified amount of **flavone** glycosides, terpene **lactones** and **ginkgolic** acid with water, alcohol and heptane.
DC B04 C03
IN LEE, I H
PA (JEON-I) JEONG H D; (LEEI-I) LEE I H
CYC 1
PI KR 2002070598 A 20020910 (200315)* A01N065-00
ADT KR 2002070598 A KR 2001-10760 20010302
PRAI KR 2001-10760 20010302
IC ICM A01N065-00
AB KR2002070598 A UPAB: 20030303

NOVELTY - Extract of **Ginkgo biloba leaves** contains specified amount of **flavone** glycosides, terpene **lactones** and **ginkgolic** acid with water, alcohol and heptane.

DETAILED DESCRIPTION - Preparation of an extract of **Ginkgo biloba leaves** with a specified amount of **flavone** glycosides, terpene **lactones** and **ginkgolic** acid with water, alcohol and heptane comprises addition of about 10 to 500 parts by weight of distilled water or an organic solvent to 100 parts by weight of **leaves** of **Ginkgo biloba**. The liquid is **filtered** or centrifuged, or extracted in a solution of ethanol or methanol and n-heptane, and distilled under reduced pressure of 0.8 multiply 103 Pa to 1 multiply 102 Pa. Thus the obtained extract contains 2 to 5% by weight of **flavone** glycosides, 0.01 to 1% by weight of terpene **lactones** and 3 to 30% by weight of **ginkgolic** acid.

ACTIVITY - Antibacterial; Insect Repellent; Antiviral.

MECHANISM OF ACTION - None given.

ADVANTAGE - Harmless to human body.

Dwg.0/0

CPI
AB

CPI: **B04-A08**; **B04-A10B**; B04-B01B; B04-C02; B04-D02; B10-E04D; B10-J02; **C04-A08**; **C04-A10B**; C04-B01B;

C04-C02; C04-D02; C10-E04D; C10-J02

L83 ANSWER 10 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2003-048850 [05] WPIX
DNC C2003-012709
TI New process for preparing **Ginkgo biloba leaf** extract for treatment of cerebral and peripheral vascular disorders, neurodegenerative disorders, and proliferative disorders.
DC B04
IN TENG, B P; TENG, B
PA (SCRC) SCRAS SOC CONSEILS RECH & APPL SCI
CYC 101
PI FR 2823116 A1 20021011 (200305)* 15p A61K035-78 <--
WO 2002083158 A1 20021024 (200305) FR A61K035-78 <--
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW
EP 1379262 A1 20040114 (200410) FR A61K035-78 <--
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
KR 2003087068 A 20031112 (200420) A61K035-78 <--
ADT FR 2823116 A1 FR 2001-4942 20010410; WO 2002083158 A1 WO 2002-FR1219 20020409; EP 1379262 A1 EP 2002-761922 20020409, WO 2002-FR1219 20020409; KR 2003087068 A KR 2003-713205 20031009
FDT EP 1379262 A1 Based on WO 2002083158
PRAI FR 2001-4942 20010410
IC ICM **A61K035-78**
ICS A61P009-00; A61P025-00; A61P025-28; A61P035-00
AB FR 2823116 A UPAB: 20030121
NOVELTY - Preparing an extract from **leaves** of **Ginkgo biloba** containing at least 50 % **flavone**-glycosides and 12 % terpene-**lactones**.

DETAILED DESCRIPTION - Preparing an extract from **leaves** of **Ginkgo biloba** containing at least 50 % **flavone**-glycosides and 12 % terpene-**lactones** comprising the following steps:

(1) extracting the dry powdered **leaves** with ethanol containing at most 20% by weight of water;

(2) concentrating the extract under reduced pressure in the presence of aqueous sodium chloride and eliminating the dark oil from the remainder of the clear solution;

(3) washing the solution by liquid-liquid extraction using n-hexane, n-heptane or cyclohexane;

(4) liquid-liquid extraction of the aqueous phase with ethyl acetate; and

(5) washing the ethyl acetate extract sodium chloride solution and evaporation.

ACTIVITY - Nootropic; Neuroprotective; Anticonvulsant; Antiparkinsonian; Cytostatic.

No biological data given.

MECHANISM OF ACTION - None given in source material.

USE - The new process is useful for preparing **Ginkgo biloba leaf** extract (claimed), which is used for the treatment of cerebral and peripheral vascular disorders and neurodegenerative disorders, such as Alzheimer's, Parkinson's, Huntington's, and amyotrophic lateral sclerosis, and treatment of proliferative disorders such as cancers.

ADVANTAGE - The extraction process gives a purer product than known methods and is more suitable for industrial application.

Dwg.0/0
FS CPI
FA AB; DCN
MC CPI: B04-A08C2; **B04-A10B**; **B11-B**; B14-F02; B14-H01; B14-J01A; B14-S01
TECH UPTX: 20030121
TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Process: Preferably the process contains the additional final step of dissolving the dried extract in ethanol, cooling the solution, **filtering** the salt that may be precipitated and evaporating to dryness.
ABEX UPTX: 20030121
ADMINISTRATION - The extracts may be given topically, orally, parenterally, intramuscularly or by other routes at a daily dose of 5 - 150 mg, preferably 10 - 100mg.
EXAMPLE - The new method was carried out as follows. Crushed **Gingko biloba leaves** (100 g) were extracted twice at 60degreesC using 800ml + 600ml of a 88 % solution of aqueous ethanol. The mixture was **filtered** and the extract and washing combined and evaporated to 100 ml. An aqueous sodium chloride solution (10 %, 350 ml) was added and the mixture evaporated at 50degreesC to eliminate residual ethanol. The resultant product was separated by decantation and **filtration** through celite to eliminate a dark oil. The resultant solution was washed with n-heptane (2 x 150 ml) then extracted with ethyl acetate (2 x 150 ml). The ethyl acetate solution was washed with saturated sodium chloride solution and evaporated to dryness. The extract was redissolved in ethanol (60 ml), left overnight at 5degreesC, **filtered** and evaporated to give an extract (1.42 g) containing 51.7 % **flavone** glycosides and 13 % terpene **lactones** (6.55 % **bilobalide**. In vitro test details are described but no results are given.

L83 ANSWER 11 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2002-269156 [31] WPIX
DNC C2002-079884
TI Heat- and storage-stable, sterile, injectable solution of **flavone** -containing plant extract comprising solution of the extract in acidified aqueous alcohol, useful for treating cerebral insufficiency.
DC B02 B04
IN HERRMANN, J; **OSCHMANN, R**; STUMPF, H; THOELE, M
PA (SCHW-N) **SCHWABE GMBH & CO WILLMAR**
CYC 97
PI WO 2002013869 A2 20020221 (200231)* DE 12p A61K047-10
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
DE 10040610 A1 20020307 (200231) A61K035-78 <--
AU 2001081717 A 20020225 (200245) A61K047-10
EP 1309353 A2 20030514 (200333) DE A61K047-10
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
KR 2003020390 A 20030308 (200345) A61K009-107
CN 1447698 A 20031008 (200403) A61K047-10
ADT WO 2002013869 A2 WO 2001-DE2871 20010724; DE 10040610 A1 DE 2000-10040610 20000816; AU 2001081717 A AU 2001-81717 20010724; EP 1309353 A2 EP 2001-960130 20010724, WO 2001-DE2871 20010724; KR 2003020390 A KR 2003-700900 20030121; CN 1447698 A CN 2001-814176 20010724
FDT AU 2001081717 A Based on WO 2002013869; EP 1309353 A2 Based on WO 2002013869
PRAI DE 2000-10040610 20000816
IC ICM A61K009-107; **A61K035-78**; A61K047-10

ICS A61K047-26
AB WO 200213869 A UPAB: 20020516
NOVELTY - A sterile, injectable solution (A) of a **flavone** -containing plant extract (I) comprises: (I) dissolved in aqueous alcohol having an alcohol content of 2-40 (preferably 10-25) weight % and a pH of 2-6 (preferably 3-4).
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for:
(1) an injectable medicament comprising (A) and a sterile buffer salt solution (B), where (A) and (B) are prepared separately, stored in separate containers and mixed before administration;
(2) the preparation of (A) by dissolving (I) in aqueous alcohol, adjusting the pH and heat-sterilizing; and
(3) the preparation of the medicaments (1), by preparing (A) as in (2), preparing (B), storing (A) and (B) in separate containers and mixing (A) and (B) before use.
ACTIVITY - Cerebroprotective; Vasotropic; Cardiant.
MECHANISM OF ACTION - None given.
USE - (I) are e.g. **Ginkgo** extracts for treating cerebral insufficiency, Aesculus extracts for treating venous disorders or Crataegus extracts for treating cardiac insufficiency.
ADVANTAGE - (A) have high storage- and heat-stability with respect to the active agent content; specifically the active agent content is reduced by not more than 10 weight % on heat sterilization or storage for 12 months under standard conditions (all claimed). Stable formulations are obtained without complicated or expensive procedures such as lyophilization.
Dwg.0/0
FS CPI
FA AB; DCN
MC CPI: B04-A08C2; **B04-A10**; B05-A01B; B05-B02A3; B05-C07; B06-A01; B12-M07; B14-F01; B14-F02; B14-J01
TECH UPTX: 20020516
TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Components: The alcohol is ethanol and/or propylene glycol. The pH of (A) is adjusted with acid, preferably hydrochloric acid. (I) is an extract of **Ginkgo biloba**, Aesculus sp. and/or Crataegus sp., preferably obtained from the **leaves** and/or blossom. (B) is phosphoric acid/sodium phosphate buffer, preferably containing isotonic agent(s) (specifically sodium chloride and/or sugar alcohols). (A) and/or (B) may contain ascorbic acid and/or other additive(s).
ABEX UPTX: 20020516
ADMINISTRATION - (A) is administered by injection, after mixing with (B).
EXAMPLE - A solution comprised **Ginkgo** extract (0.916 weight%), sorbitol (4.985 weight%), ethanol (96%) (19.940 weight%), 1N hydrochloric acid (0.474 weight%) and water (73.685 weight%) for injection. Preparation involved dissolving the sorbitol in 90% of the water, adding the ethanol followed by the extract under stirring, adjusting the pH to 3.0 using the hydrochloric acid and adding the remainder of the water. After sterile **filtration** using a 0.22 microns membrane **filter**, the solution was filled in ampoules under sterile nitrogen and steam-sterilized for 15 minutes at 121 degrees C. After cooling, the clear and free of sediment. The reduction in active agent contents during sterilization was 2.0% for **flavone** glycosides and 3.8% for terpene **lactones**. Before use, 2 ml of the solution was mixed with 2 ml of a suitable buffer to give pH 6.8.

L83 ANSWER 12 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2002-122384 [16] WPIX
DNC C2002-037539
TI Preparation of composition comprising Chinese herbs, is used for preventing or treating cardiovascular or cerebrovascular diseases, capable of delaying aging or regulating bodily immune function including remedies for asthma.
DC B04

IN PAN, Y; WU, M; ZHAO, X
PA (ZHAO-I) ZHAO X
CYC 96
PI WO 2002000234 A1 20020103 (200216)* ZH 23p A61K035-78 <--
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001077446 A 20020108 (200235) A61K035-78 <--
ADT WO 2002000234 A1 WO 2001-CN1061 20010626; AU 2001077446 A AU 2001-77446 20010626
FDT AU 2001077446 A Based on WO 2002000234
PRAI CN 2000-109461 20000626
IC ICM **A61K035-78**
ICS A61K035-80; A61P009-00; A61P037-02; A61P043-00
AB WO 200200234 A UPAB: 20020308
NOVELTY - A drug preparation for preventing or treating cardiovascular or cerebrovascular diseases, delay of aging or regulating bodily immune function, comprises (pts.weight) **Ginkgo biloba leaf** extract (8-24, particularly 10, especially 16), Astragalus membranaceus extract (12-36, particularly 30, especially 24) and Spirulina extract (30-90, particularly 60, especially 50).

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(i) a method for producing the drug preparation comprising mixing all the three raw materials together; and

(ii) the use of the **Gingko biloba** and Astragalus membranaceus extracts and Spirulina is for producing drugs for preventing or treating cardiovascular and cerebrovascular diseases, and for delaying aging and regulating bodily immune function.

ACTIVITY - Cardiant; antidiabetic; antiasthmatic; antiallergic.
No biological data given.

MECHANISM OF ACTION - None given.

USE - The preparations are for preventing or treating cardiovascular and cerebrovascular diseases, capable of delaying aging and regulating bodily immune function including as remedies for asthma, allergy, diabetes or hair loss.

Dwg.0/0
FS CPI
FA AB; DCN
MC CPI: **B04-A08**; **B04-A09**; **B04-A10**; B14-F01; B14-G02A; B14-G03; B14-K01A; B14-R02; B14-S04
TECH UPTX: 20020308
TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Drugs: The drug preparations preferably contain not less than 24% **flavones** of **Gingko biloba** and not less than 6% **bilobalide** from **Gingko biloba** extract, and not less than 0.1% baicalein A from Astragalus membranaceus. Preferred Methods: The **Ginkgo biloba leaf** extract obtained by refluxing dried and pulverized **leaves** by evaporating off ethanol from the extract for adsorption on large-bore adsorption resin (e.g. D-100 type) and with ethanol for elution, recovering ethanol and drying the distillate. Such extract has not less than 24% **flavones** of **Ginkgo biloba** and not less than 6% **bilobalide**.
The **Gingko biloba leaf** extract can also be prepared by boiling dried and powdered **leaves** to 20 mesh with 10 to 50-fold an aqueous solution containing 1-2% antioxidant (thrice) each for 1-2 hrs, combining the aqueous extracts for passing through a polyamide column (at column height to wide ratio of 4-15), with 3-fold water for percolation and 60-90% ethanol for elution, concentration, extracting with n-hexane twice, and concentrating and drying to give total **flavones** of **Gingko biloba**.

The aqueous solution of antioxidant is particularly aqueous 0.5 % sodium pyrosulfite. The polyamide column height to wide ratio is especially 4, with 70% ethanol for eluting the column.
The Astragalus membranaceus extract is obtained by chopping the crude drug into pieces for boiling with 15 to 30-fold water thrice, each time for 0.5-2 hrs., combining the extracts, **filtering** and applying the **filtrate** for adsorption on an adsorption resin (D1-101 type) column, elution with 40-90% ethanol, recovery of ethanol, and drying the distillate. Such extract contains not more than 0.1% baicalein A (C44H68O4).

ABEX UPTX: 20020308

ADMINISTRATION - Administration is particularly oral, e.g. taking capsules at 0.75 g daily.

EXAMPLE - The drug preparations were formulated from **Gingko biloba leaf** extract (10 kg), Astragalus membranaceus extract (30 kg) and Spirulina (60 kg) for granulation then packed into capsules at 0.25 g each.
Such preparation was given to mice and rats for studying its effect on regulating immune system and delaying aging, and on patients with cardiovascular and cerebrovascular diseases.

L83 ANSWER 13 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2002-091748 [13] WPIX
DNC C2002-028527
TI Water-soluble complex useful as chemical, pharmaceutical and clinical agent comprises an extract of **Ginkgo biloba leaves** with N-methylglucamine.
DC B04
IN PARACCHINI, S
PA (LINN-N) LINNEA SA
CYC 28
PI EP 1163908 A1 20011219 (200213)* EN 10p A61K035-78 <--
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI
AU 2001043768 A 20011220 (200213) A61K035-78 <--
US 2002012713 A1 20020131 (200216) A61K035-78 <--
JP 2002047191 A 20020212 (200227) 5p A61K035-78 <--
US 6447819 B2 20020910 (200263) A01N065-00
ADT EP 1163908 A1 EP 2000-202088 20000616; AU 2001043768 A AU 2001-43768 20010508; US 2002012713 A1 US 2001-853695 20010514; JP 2002047191 A JP 2001-153883 20010523; US 6447819 B2 US 2001-853695 20010514
PRAI EP 2000-202088 20000616
IC ICM A01N065-00; **A61K035-78**
ICS A61K031-343; A61K031-70; A61K031-7008; A61K047-48; A61P009-00; A61P025-02; A61P025-14; B01D011-02
AB EP 1163908 A UPAB: 20020226
NOVELTY - A water - soluble complex of N-methylglucamine with an extract of **Ginkgo biloba (leaves)**.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for preparing the water-soluble complex involving
(a) adding N-methylglucamine to an alcoholic solution of the extract;
(b) **filtering** the obtained solid product; and
(c) followed by removing the solvent.
USE - As chemical, pharmaceutical and clinical agent.
ADVANTAGE - The complex is rich in **flavonoids** and has a low content of other components. The complex has a water solubility of about 1 - 30 (preferably 3 - 10) w/v.%.
Dwg.0/0
FS CPI
FA AB; DCN
MC CPI: B04-A08C2; **B04-A10B**; B10-B03B
TECH UPTX: 20020226

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Complex: The complex comprises (w/w.%): **flavone** glycoside (15 - 30), **ginkgolides** (0.1 - 7), **bilobalide** (0 - 2), proanthocyanidins (1 - 2), N-methylglucamine (32 - 34) and water-soluble inert plant matter (25 - 51.9). The extract of **Ginkgo biloba (leaves)** comprises (w/w.%): **flavone** glycosides (22 - 45), **ginkgolides** (0.1 - 12), **bilobalide** (0.01 - 5) and proanthocyanidins (3 - 8). Preferred Method: The amount of the extract in step (a) is equal to about 1.5 - 3 times (preferably twice) the weight of the N-methylglucamine.

ABEX UPTX: 20020226

EXAMPLE - A **Ginkgo biloba (leaf)** extract containing (w/w.%): **flavone** glycoside (38.17), **Ginkgolide** (4.3), **bilobalide** (0.28) and proanthocyanidin (3.22) was prepared. A solution of the extract in methanol (849 ml) was stirred till the solid extract had fully dissolved. N-methylglucamine (28 g) dissolved in water (10 ml) was added to the solution. The mixture was stirred for 5 minutes and **filtered.** The resulting solution was concentrated under reduced pressure and at not more than 50degreesC. The resulting solid residue was ground and dried under reduced pressure and at not more than 70degreesC. A complex of N-methylglucamine with **Ginkgo biloba leaf** extract (94%) was thus obtained as brown-yellow product, having a solubility of 1% in distilled water with a pH of 7.8.

L83 ANSWER 14 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2001-535460 [59] WPIX
DNC C2001-159426
TI New external preparation useful for skin comprises extract of particular plant.
DC B03 B04 D21 D22
IN HIGUCHI, Y; HOSHINO, T; MORIYAMA, M; SAKATA, O
PA (KOSE-N) KOSE CORP; (KOSE-N) KOSE KK; (SHIR-N) SHIRATORI SEKIYAKU KK; (SHIR-N) SHIRATORI PHARM CO LTD; (HIGU-I) HIGUCHI Y; (HOSH-I) HOSHINO T; (MORI-I) MORIYAMA M; (SAKA-I) SAKATA O
CYC 4
PI US 2001014311 A1 20010816 (200159)* 12p A61K007-42
JP 2001181170 A 20010703 (200159) 10p A61K007-48
CN 1301543 A 20010704 (200161) A61K035-78 <--
JP 2001220340 A 20010814 (200161) 10p A61K007-48
KR 2001057585 A 20010704 (200206) A61K035-78 <--
US 6352685 B2 20020305 (200224) A61K007-42
ADT US 2001014311 A1 US 2000-740859 20001222; JP 2001181170 A JP 1999-367587 19991224; CN 1301543 A CN 2000-131090 20001223; JP 2001220340 A JP 2000-29348 20000207; KR 2001057585 A KR 2000-80382 20001222; US 6352685 B2 US 2000-740859 20001222
PRAI JP 2000-29348 20000207; JP 1999-367587 19991224
IC ICM A61K007-42; A61K007-48; **A61K035-78**
ICS A01N037-02; A61K006-00; A61K007-00; A61P017-00
AB US2001014311 A UPAB: 20011012
NOVELTY - An external preparation comprising an extract of Pueraria mirifica, is new.
USE - For anti-aging and whitening of skin and to perform specified drug effect in cosmetics and medical external preparations such as milk lotions, creams, lotions, packs, detergents, dispersion solutions, ointments, liquids for external use and makeup cosmetics.
ADVANTAGE - Since the extract is obtained from a high safety plant extract having high melanin formation inhibition the external preparation has better whitening or anti-aging effect.
Dwg.0/0
FS CPI
FA AB; DCN
MC CPI: B01-A01; B03-L; **B04-A08**; **B04-A09**; **B04-A10**

; B05-A03; B06-A01; B07-A02B; B10-A07; B10-C04B; B10-E02; B10-E04C; B10-F02; B14-N17; D08-B09A; D09-E

TECH UPTX: 20011012

TECHNOLOGY FOCUS - BIOLOGY - Preferred Components: The external preparation for whitening additionally comprises at least one active ingredient (a) selected from a whitening agent, an anti-oxidant, an anti-inflammatory agent or an ultraviolet-ray shielding ingredient, or at least one active ingredient (b) for anti-aging selected from a cell activation agent, an anti-oxidant, a humectant or an ultraviolet-ray shielding ingredient. The whitening agent is placenta extract, licorice extract, coix seed extract, scutellaria root extract or seaweed extract. The antioxidant of (a) is ginseng extract, balm mint extract or Alnus firma Siebold. et. Zucc. extract. The anti-inflammation agent is aloe extract, beefsteak plant extract, mugwort extract or matricaria extract. The cell activation agent is placenta extract, yeast extract, apricot extract, plant extract including AHA such as lime extract and raspberry extract, asparagus extract, almond extract, soybean extract, centella extract, tomato extract, malt root extract or seaweed extract. The antioxidant of (b) is **gingko** extract, plant extract including **flavonoid** such as scutellaria root extract and balm mint extract, a saxifrage extract, Siberian ginseng extract, a ginseng extract or Alnus firma Siebold. et Zucc. extract. The humectant is sweet hydrangea **leaf** extract, aloe extract, cactus extract, coltsfoot extract or quince seed extract.

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Components: The whitening agent is vitamin C, its derivatives or salts. The antioxidant of (a) is vitamin E, its derivatives or salts. The anti-inflammation agent is glycyrrhizinic acid, glycyrrhetinic acid, their derivatives or salts. The ultraviolet ray shielding ingredient of (a) and (b) is 2-ethylhexyl para-methoxy cinnamate, oxybenzone or 4-tert-butyl-4'-methoxydibenzoylmethane. The cell activation agent is vitamin A, vitamin C, their derivatives or salts or estradiol. The anti-oxidant of (b) is vitamin B, vitamin E, their derivatives or salts, dibutylhydroxytoluene, dibutyl hydroxyanisol, mannitol, carotenoid such as asterxanthine, quercetin or quercitol. The humectant is amino acid, its derivatives or salts, glycerol or 1,3-butylene glycol.
TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Components: The ultraviolet ray shielding ingredient of (a) and (b) is titanium oxide, micronized particle titanium oxide or zinc oxide.

TECHNOLOGY FOCUS - POLYMERS - Preferred Component: The humectant is mucopolysaccharide, its derivatives or salts or phospholipid or its derivatives.

ABEX UPTX: 20011012

EXAMPLE - Each 100 ml of purified water (a), 50 % ethanol solution (b) and ethyl alcohol (c) was added to dried root lumps (10 g) of Pueraria mirifica. The mixtures were extracted for 3 days under room temperature and **filtered** to obtain dried solids of (a), (b) and (c) in 4.2, 2.1 and 1.2 %, respectively. For comparison, ethanol having water content of 70 %, by volume (100 ml) was added to coix seed (10 g) and the mixture was extracted 3 days at room temperature, **filtered** and dried to obtain a comparative coix seed extract (d) (0.8 %). A test for inhibition for melanin formation was conducted by using B16 melanoma cultured cell of mouse origin. The cell was inoculated in a culture medium and stored at 37 degrees C under 5 % carbon dioxide concentration. Next morning (a), (b), (c) and (d) were added separately to the culture medium. The concentration of each extract was 300, 500 and 1000 micro-g/ml and the culture mediums were mixed. The mediums were exchanged after incubation of 5 days. Next morning the culture mediums were eliminated and the cell was retrieved after washing with phosphoric acid buffer solution. Similarly (d) was tested for whitening effect. The whitening effect for (a)/(b)/(c)/(d) at 300, 500 and 1000 micro-g/ml was whitelittle/whitelittle/whitelittle/black

, whitelittle/whitelittle/whitelittle/black and obviously white/ obviously white/ obviously white/none given, respectively. Thus (a), (b) and (c) had high inhibition ability for melanin formation.

L83 ANSWER 15 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2001-503340 [56] WPIX
DNC C2001-151420
TI A process for preparing **gingko** injection.
DC B04
IN SHAO, B; ZHOU, J
PA (SHAN-N) SHANGHAI INST CHINESE MEDICAL MATERIALS
CYC 1
PI CN 1298738 A 20010613 (200156)* 1p A61K035-78 <--
ADT CN 1298738 A CN 1999-124228 19991209
PRAI CN 1999-124228 19991209
IC ICM **A61K035-78**
ICS A61K009-08
AB CN 1298738 A UPAB: 20011001
NOVELTY - Preparation of **gingko** injection comprises adding antioxidant and metal ion complexing agent, regulating pH value, **ultrafiltration**, and introducing inert gas, etc. so as to solve the problems of unstability of **gingko** injection liquid, with easy color change and precipitation.
ADVANTAGE - The invented method is simple in operation and reliable in quality.
Dwg.0/0
FS CPI
FA AB
MC CPI: **B11-B**; B12-M05

L83 ANSWER 16 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2000-403076 [35] WPIX
DNC C2000-122385
TI Manufacture of **ginkgo leaf** extract involves crushing and extracting **ginkgo leaf** with dimethyl ether, recovering **filtrate**, concentrating and adding electrolyte, desalinating and separating insoluble fraction.
DC B04 D13
PA (ASAH) ASAHI KASEI KOGYO KK
CYC 1
PI JP 2000128792 A 20000509 (200035)* 6p A61K035-78 <--
ADT JP 2000128792 A JP 1998-299238 19981021
PRAI JP 1998-299238 19981021
IC ICM **A61K035-78**
ICS A23L001-30; A61P009-00
AB JP2000128792 A UPAB: 20000725
NOVELTY - **Ginkgo leaf** is crushed and extracted with dimethyl ether. Extraction residue is separated and **filtrate** is recovered. Ether in extract is evaporated and precipitate formed is separated. Recovered aqueous extraction **filtrate** is concentrated and an electrolyte is added to it. The insoluble fraction is desalinated, separated and powder extract is formed by drying after removing solvent.
DETAILED DESCRIPTION - **The ginkgo leaf** is crushed and extracted with water containing dimethyl ether. The extract with extraction residue is separated and the extraction **filtrate** is recovered. The dimethyl ether in the extract is evaporated using an aqueous extract and forms a precipitate, since the hydrophobic material is settled in the extraction **filtrate**. The aqueous extract having precipitated is separated and aqueous extraction **filtrate** is recovered which is concentrated, an electrolyte is added and the active ingredient is settled. The insoluble fraction is recovered, dissolved again and desalinated with water containing dimethyl ether. The insoluble matter is separated and the powder extract is recovered by drying after

removal of solvent.
USE - The extract is useful as a cosmetic material in pharmaceuticals and foodstuffs.
ADVANTAGE - Highly safe **ginkgo leaf** extract is manufactured and the process is economical.
Dwg.0/0
FS CPI
FA AB; DCN
MC CPI: **B04-A10B**; **B11-B**; B14-R01; D03-H
TECH UPTX: 20000725
TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Composition: The water containing dimethyl ether contains 7-60 w/w%, preferably 2-7 w/w% of moisture contents. 5-20 times of water containing dimethyl ether is contained per 1 weight (dry weight) of **ginkgo leaf.**
The aqueous extraction **filtrate** is concentrated until it contains 10-20% of solid substance. 30-60 w/v% of concentration of ammonium sulfate is additionally added for concentrated aqueous extraction **filtrate.**
Preferred Process: The extraction process is carried out at 10-30degreesC under the extraction pressure of 0.2-0.8 MPas.
Preferred Electrolyte: The electrolyte is sulfate of metal or ammonium, chloride or nitrate, preferably ammonium sulfate.
ABEX UPTX: 20000725
EXAMPLE - (In grams) Dried and ground **ginkgo leaves** (100) and water (400) were supplied to 3L bomb, stirred at 30degreesC for 30 min, extracted with dimethyl ether (DME) without water (600), **filtered** by sintering metal and **filtrate** was supplied to another bomb. The DME in **filtrate** was evaporated at 10degreesC under atmospheric pressure for 30 min. Aqueous extract was pressure **filtered** by membrane **filter**, having diameter of 142 mm. Precipitate was removed, recovered **filtrate** (400) was concentrated to 150 ml in vacuum by evaporator. Ammonium sulfate (90) was added, stirred with concentrated liquid for 1 hour at room temperature. Precipitate was ripened and solution was separated. Precipitate was suspended by water (10) and were supplied to bomb. DME (190) was supplied and stirred at 30degreesC for 30 min. Precipitate in suspension was **filtered**, separated and **filtrate** was supplied to another bomb. DME in liquid was evaporated at 10degreesC under atm.pr for 30 min. The remained aqueous solution was dried for a day at room temperature by lyophilization. **Ginkgo leaf** extract powder (2) was obtained. The analysis value of extract was 1 ppm or less in 24% of **flavone** glycoside contents, 6% of terpene **lactone** contents, 10 ppm or less of **ginkgo** acid contents and DME contents.

L83 ANSWER 17 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2000-256854 [22] WPIX
DNC C2000-078428
TI New plant-derived antipollution complex for use in cosmetic or pharmaceutical compositions, useful e.g. for protecting skin or hair against effects of atmospheric pollution, solar radiation or weathering.
DC B04 D21
IN ARMENGOL SEGURA, R; BENAIGES BENAIGES, M
PA (PROV-N) PROVITAL SA
CYC 88
PI WO 2000013693 A2 20000316 (200022)* ES 25p A61K035-00
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW
ES 2141687 A1 20000316 (200028) A61K007-40

AU 9957476 A 20000327 (200032) A61K035-00
ES 2141687 B1 20001101 (200066) A61K007-40
ADT WO 2000013693 A2 WO 1999-ES286 19990906; ES 2141687 A1 ES 1998-1886 19980907; AU 9957476 A AU 1999-57476 19990906; ES 2141687 B1 ES 1998-1886 19980907
FDT AU 9957476 A Based on WO 2000013693
PRAI ES 1998-1886 19980907
IC ICM A61K007-40; A61K035-00
ICS A61K007-06; A61K007-48; **A61K035-78**; A61P017-00
AB WO 200013693 A UPAB: 20000508
NOVELTY - A new antipollution complex (I) comprises:
(a) a fruit extract containing sugars and polysaccharides;
(b) a liquid phase derived from a plant extract containing sapogenins and/or **flavonoids**; and
(c) a liquid phase derived from a cereal and/or vegetable plant extract containing dicarboxylic acids, hydroxyacids, polyphosphoric acids, aminoacids, peptides, proteins and porphyrins.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for the preparation of (I).
ACTIVITY - Cytoprotective; dermatological.
A complex (I) (no description given) at 250 mu g/ml gave 40% protection of liposomes against heavy metal-induced lipid peroxidation.
MECHANISM OF ACTION - Antioxidant; antiradical; heavy metal sequestrant.
USE - (I) has antioxidant, detoxifying, cell membrane protecting and/or stabilizing, anticytotoxic and moisturizing activity. Component (a) protects and/or stabilizes cell membranes of the skin against the effect of external harmful agents; (b) has antioxidant and anti-free radical action; and (c) has heavy metal sequestering and detoxifying action. (I) is used in pharmaceutical or cosmetic compositions (claimed) for protecting the skin, hair, mucosa and respiratory tract against the harmful effects of atmospheric pollution, solar UV radiation and weathering.
ADVANTAGE - (I) is effective against a wide range of harmful factors and agents, and can be used in a wide range of formulations.
Dwg.0/0
FS CPI
FA AB; DCN
MC CPI: **B04-A07E**; **B04-A10**; B04-C02; B04-D01; B04-N04; B05-B02A3; B06-D18; B10-B02; B10-C02; B10-C04D; B14-K01; B14-M01D; B14-R01; B14-R02; B14-R05; B14-S08; D08-B03; D08-B09A
TECH UPTX: 20000508
TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Components: (a) is derived from e.g. apples, pears, oranges, bitter oranges and/or lemons, and contains pectins. (b) is derived from e.g. Indian chestnut seeds, Centella entera, ginseng root, Eleutherococcus root, thistle fruit, **ginkgo leaves**, Rutaceae fruit, primrose flowers and/or whitethorn flowers. (c) is derived from wheat and/or barley extract, and contains inositol hexaphosphate as active agent.
Preparation: Preparation of (I) involves: (1) preparing component (a) by washing the fruit with deionized water, crushing, removing juices, extracting the pulp at 60-100degreesC and pH 1.5-3, optionally concentrating, **filtering** and/or centrifuging the acidic extract and stirring the extract at below 60degreesC and pH below 4; (2) preparing component (b) by comminuting the plant materials, extracting by maceration with aqueous alcohol (containing 50-70 wt. % ethanol) at a plant/solvent ratio of 1:2-2.5 and not more than 50degreesC for 24 hours, separating the liquid extract, repeating the extraction step, combining the extracts and **filtering** to give a clear, transparent solution of pH ca. 5; (3) adding component (b) to component (a) with stirring at pH below 60degreesC; (4) preparing component (b) by washing the cereals and/or vegetables at below 65degreesC, comminuting to give a flour, extracting by maceration with a weakly acidic aqueous solvent and **filtering**

the extract to give a transparent solution; (5) adding component (c) to the mixture of (a) and (b) with stirring at below 40degreesC; and (6) stirring the mixture until completely homogeneous and neutralizing.

ABEX UPTX: 20000508

ADMINISTRATION - (I) is typically formulated in bath gel, liquid soap, shampoo, conditioning shampoo, hair tonic, after-shave, sunscreen cream or milk, facial tonic, moisturizing cream, gel, make-up or spray compositions at concentrations of 1-5%.

EXAMPLE - No specific example of the preparation or composition of a plant-derived complex is given; the only preparative example is a general procedure. A shampoo contained 42.1 % water, 0.5% preservative, 4.0% cocoamidopropyl betaine (30%), 5.0% cocoamidopropyl amine oxide (30%), 17.0 % sodium lauryl ether sulfosuccinate (30%), 1.3% cocoamido MEA, 12.0% sodium 14-16C olefinsulfonate (37%), 15% water, 0.1% lactic acid, 0.5 % sodium chloride, 0.5 % perfume and 2.0 % antipollution vegetable complex (no details given).

L83 ANSWER 18 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2000-117739 [11] WPIX
DNC C2000-036253
TI Water-soluble dry plant extracts, useful in medicines, cosmetics or dietetic foods.
DC B04 D13 D21
IN **GRETHLEIN, E**; **OSCHMANN, R**; ERDELMEIER, C; STUMPF, K; SUDECK, A
PA (SCHW-N) **SCHWABE GMBH & CO WILLMAR**
CYC 23
PI DE 19829516 A1 20000105 (200011)* 7p A23L001-221
WO 2000001397 A1 20000113 (200011) DE A61K035-78 <--
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: AU CA JP US
AU 9954069 A 20000124 (200027) A61K035-78 <--
EP 1089748 A1 20010411 (200121) DE A61K035-78 <--
R: AT BE CH DE ES FR GB IT LI NL
AU 745660 B 20020328 (200235) A61K035-78 <--
JP 2002519383 W 20020702 (200246) 20p A61K035-78 <--
EP 1089748 B1 20030604 (200344) DE A61K035-78 <--
R: AT BE CH DE ES FR GB IT LI NL
DE 59905853 G 20030710 (200347) A61K035-78 <--
ADT DE 19829516 A1 **DE 1998-19829516 19980702**; WO 2000001397 A1 **WO 1999-DE1812 19990619**; AU 9954069 A AU 1999-54069 19990619; EP 1089748 A1 EP 1999-939923 19990619, **WO 1999-DE1812 19990619**; AU 745660 B AU 1999-54069 19990619; JP 2002519383 W **WO 1999-DE1812 19990619**, JP 2000-557843 19990619; EP 1089748 B1 EP 1999-939923 19990619, **WO 1999-DE1812 19990619**; DE 59905853 G DE 1999-505853 19990619, EP 1999-939923 19990619, **WO 1999-DE1812 19990619**
FDT AU 9954069 A Based on WO 2000001397; EP 1089748 A1 Based on WO 2000001397; AU 745660 B Previous Publ. AU 9954069, Based on WO 2000001397; JP 2002519383 W Based on WO 2000001397; EP 1089748 B1 Based on WO 2000001397; DE 59905853 G Based on EP 1089748, Based on WO 2000001397
PRAI **DE 1998-19829516 19980702**
IC ICM A23L001-221; **A61K035-78**
ICS A23L001-00; A23L001-30; A61K007-00; A61K007-48; **A61K031-365**; A61K031-70; A61K031-7048
AB DE 19829516 A UPAB: 20000301
NOVELTY - New water-soluble, native dry extracts (I) of plant parts, especially **Ginkgo biloba leaves**, consist entirely of contents of the plant parts and are free from solubilizers and galenic auxiliaries.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for the preparation of (I).

ACTIVITY - None given.

MECHANISM OF ACTION - None given.

USE - (I) are used for the preparation of medicines, cosmetics and/or dietetic foods (all claimed). No details of specific applications are given.

ADVANTAGE - (I) is completely water-soluble; has a high content of the relevant active components (specifically terpenoids and **flavone** glycosides in the case of **Ginkgo biloba leaf** extracts); is free of additives (which could case problems such as complexing and inhibition of release of **gingkolides**); can be prepared simply and inexpensively; and specifically may have higher percentage content of terpene **lactones** and **flavone** glycosides than the crude drug (claimed).

Dwg.0/1

FS CPI

FA AB; DCN

MC CPI: **B04-A10B**; B06-A01; B14-E12; B14-R01; D03-H01T2; D08-B

TECH UPTX: 20000301

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Extract: (I) is:
(i) a dried primary extract (crude extract);
(ii) a dry extract which has been partially purified by removal of extraction solvents and components which precipitate from aqueous solution in the cold; or
(iii) a dry extract which has been purified as in (b) and further purified by removal of unwanted components by precipitation reactions, adsorption and desorption, extraction with butanol or other purification methods.
Specifically (I) contains (by weight) at least 20 % **flavone** glycosides, at least 5 % terpene **lactones** and at most 5 ppm **ginkgolic** acids; or at least 22-27 % **flavone** glycosides, at least 5-7 % terpene **lactones**, at least 2.8-3.4 % **ginkgolides** A, B and C, at least 2.6-3.2% **bilobalides** and at most 5 ppm **ginkgolic** acids.
Preparation: Claimed preparation of (I) involves:
(a) preparing a liquid aqueous alcoholic extract or dry extract by conventional methods;
(b) taking up the extract (if dry) in water and/or organic solvent, preferably in aqueous alcohol;
(c) subjecting the (preferably aqueous alcoholic) extract solution to **ultrafiltration** through a **filter** having an average pore size of 2000-10000 Daltons; and
(d) separating the organic solvent(s) and optionally drying the **ultrafiltrate.**
Preferably stage (a) involves obtaining a crude extract by extracting the plant parts with aqueous alcohol or aqueous ketone, removing the extraction solvent, removing unwanted (specifically lipophilic) components by precipitation using addition of water and cooling, and further purifying to remove unwanted components and enrich the desired components (by precipitation reactions, adsorption and desorption, extraction with butanol or other purification methods), removing the solvent(s) and drying.

ABEX UPTX: 20000301

EXAMPLE - 4.65 g of **Ginkgo biloba** EGb dry extract was adjusted to 10 % solution with 50 weight % ethanol and subjected to **ultrafiltration** using a polyamide membrane with a pore size of 5000 Daltons. The retentate was further washed with 60 weight % ethanol 96 x 30 ml). The **filtrate** was concentrated and dried overnight at 45 degreesC and below 50 mbar. 3.47 g (74.62,%) of **filtrate** and 1.18 g (25.38,%) of retentate were obtained. The dry extract contained 6.3,% total terpene **lactones**, 24.05,% **flavone** glycosides and less than 5 ppm **ginkgolic** acids; and dissolved completely in water to give a clear 0.1,% solution which remained non-turbid on standing for 2 hours.

L83 ANSWER 19 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2000-116727 [10] WPIX
DNC C2000-035698
TI Extraction method for isolating compounds from vegetable material with therapeutic and cosmetic properties .
DC B04 D21
IN RUIJTEN, H M
PA (XENO-N) XENOBIOSIS
CYC 85
PI WO 9965504 A1 19991223 (200010)* EN 11p A61K035-78 <--
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW
NL 1009437 C2 19991221 (200012) A61K035-78 <--
AU 9946576 A 20000105 (200024) A61K035-78 <--
EP 1087780 A1 20010404 (200120) EN A61K035-78 <--
R: AT BE CH DE DK ES FI FR GB IT LI PT SE
KR 2001052992 A 20010625 (200173) A61K035-78 <--
CN 1310624 A 20010829 (200176) A61K035-78 <--
JP 2002518337 W 20020625 (200243) 15p A61K035-78 <--
EP 1087780 B1 20040303 (200417) EN A61K035-78 <--
R: AT BE CH DE DK ES FI FR GB IT LI PT SE
DE 69915290 E 20040408 (200425) A61K035-78 <--
ADT WO 9965504 A1 WO 1999-NL379 19990618; NL 1009437 C2 NL 1998-1009437 19980618; AU 9946576 A AU 1999-46576 19990618; EP 1087780 A1 EP 1999-929944 19990618, WO 1999-NL379 19990618; KR 2001052992 A KR 2000-714387 20001218; CN 1310624 A CN 1999-808894 19990618; JP 2002518337 W WO 1999-NL379 19990618, JP 2000-554383 19990618; EP 1087780 B1 EP 1999-929944 19990618, WO 1999-NL379 19990618; DE 69915290 E DE 1999-615290 19990618, EP 1999-929944 19990618, WO 1999-NL379 19990618
FDT AU 9946576 A Based on WO 9965504; EP 1087780 A1 Based on WO 9965504; JP 2002518337 W Based on WO 9965504; EP 1087780 B1 Based on WO 9965504; DE 69915290 E Based on EP 1087780, Based on WO 9965504
PRAI NL 1998-1009437 19980618
IC ICM **A61K035-78**
ICS A61K007-00; A61K007-48; A61K031-35; A61K031-48; B01D011-00; B01D011-02
AB WO 9965504 A UPAB: 20000228
NOVELTY - Extracting a compound (I) from vegetable material (II) comprising treatment of (II) with a liquified gas, especially liquid nitrogen, to reduce its size prior to extraction with a solvent and removal of the solid matter from the solvent containing (I) is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for pharmaceutical (III) and cosmetic (IV) compositions comprising (I) obtained by the new method.
USE - The method is useful for extraction of water soluble actives from vegetable material, especially from the **ginko** tree or Huperzia serrata, to obtain (III) and (IV), useful for the treatment of e.g. Alzheimer's disease and patients with symptoms caused by prolonged contact with organic chemicals, and for maintaining the suppleness of the skin respectively.
ADVANTAGE - As the method employs fresh herbs and a shortened extraction time, the yield of the active agents is improved.
Dwg.0/0
FS CPI
FA AB; DCN
MC CPI: **B04-A08**; **B04-A09**; **B04-A10**; B14-J01A4; B14-R01; D08-B09
TECH UPTX: 20000228
TECHNOLOGY FOCUS - BIOLOGY - Preferred Vegetable Material: (II) is preferably fresh **leaves** obtained from **Ginkgo**

**biloba** (the **ginko** tree) or Huperzia serrata.
**Ginko** material is selected from a 1-15, preferably 5-year old tree.
Preferred Method: After reduction of the size of (II), (II) may be treated with enzymes to enhance breakdown of the cell walls. The solvent used is preferably water with a pH of 4-7 and extraction is performed for a maximum of 3 hours at a temperature of 10-60degreesC, preferably 20-40degreesC. The extract obtained is preferably subjected to **microfiltration**, and sprayed or freeze dried. Optionally the initial solvent is removed and the residue extracted with a further solvent.

ABEX UPTX: 20000228
ADMINISTRATION - (III) can be administered orally or parenterally.
EXAMPLE - **Ginko leaves** (10 g) were treated with liquid nitrogen (3 ml) within 72 hours of being picked. The frozen **leaves** were crushed using a porcelain mortar and water added (100 ml) with 1:1000% w/v of Ultrazyme AFP-L and Cellubrix L. The mixture was incubated for 2 hours at 50degreesC at a pH of 5.5 and subsequently extracted at a pH of 4-5. The liquid, containing **ginkolides** and **flavonoids** as active components, was **filtered** over a large-mesh **filter** to separate the solid matter and then subjected to **microfiltration** using a 0.2 mum hydrophilic **filter** and subsequently freeze-dried. Samples were reconstituted and extracted (x2) with MIK or t-butyl ether and the solvent removed. The residues were analysed using HPLC and found to contain a mixture of Biobalide, **Ginkolide** A and B, Quercetin, Kaempferol and Isorametine. It was noted that the extraction with organic solvents improves the purity of the product, t-butyl ether was useful in providing a higher yield of **ginkolides** in relation to **flavonoids**
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L83 ANSWER 20 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1999-372169 [32] WPIX
DNC C1999-110040
TI **Gingko biloba leaf** extract - for production of medicament with less side effects.
DC B04
IN SCHWABE, K
PA (SCHW-N) **SCHWABE GMBH & CO WILLMAR**
CYC 22
PI DE 19756848 A1 19990701 (199932)* 4p A61K035-78 <--
WO 9932129 A1 19990701 (199933) DE
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: CN JP KR US
EP 1037646 A1 20000927 (200048) DE A61K035-78 <--
R: DE FR GB IT
KR 2000063097 A 20001025 (200124) A61K035-78 <--
CN 1282252 A 20010131 (200131) A61K035-78 <--
JP 2001526235 W 20011218 (200203) 14p A61K035-78 <--
US 6328999 B1 20011211 (200204) A61K035-78 <--
EP 1037646 B1 20020904 (200266) DE A61K035-78 <--
R: DE FR GB IT
DE 59805452 G 20021010 (200269) A61K035-78 <--
DE 19756848 C2 20030116 (200305) A61K035-78 <--
ADT DE 19756848 A1 DE 1997-19756848 19971219; WO 9932129 A1 WO 1998-DE3790 19981218; EP 1037646 A1 EP 1998-966583 19981218, WO 1998-DE3790 19981218; KR 2000063097 A KR 2000-32649 20000614; CN 1282252 A CN 1998-812437 19981218; JP 2001526235 W WO 1998-DE3790 19981218, JP 2000-525120 19981218; US 6328999 B1 WO 1998-DE3790 19981218, US 2000-555235 20000525; EP 1037646 B1 EP 1998-966583 19981218, WO 1998-DE3790 19981218; DE 59805452 G DE 1998-505452 19981218, EP 1998-966583 19981218, WO 1998-DE3790 19981218; DE 19756848 C2 DE 1997-19756848 19971219
FDT EP 1037646 A1 Based on WO 9932129; JP 2001526235 W Based on WO 9932129; US

6328999 B1 Based on WO 9932129; EP 1037646 B1 Based on WO 9932129; DE 59805452 G Based on EP 1037646, Based on WO 9932129

PRAI DE 1997-19756848 19971219

IC ICM **A61K035-78**
ICS A01N065-00; A61P009-00; A61P009-10; A61P009-14; A61P025-00; A61P043-00

AB DE 19756848 A UPAB: 20010528
NOVELTY - An extract (I) from the **leaves** of **Gingko biloba** comprises (in weight%): flavonol glycoside (20-30); **gingkolide** A, B, C and J (2.5-4.5); **bilobalid** (2.0-4.0); alkyl phenol (at less than 10 ppm); proanthocyanidine (less than 10); 4'-O-methylpyridoxin (less than 50 ppm); and biflavone (less than 100 ppm). DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a medicament comprising (I).
USE - For production of medicament.
ADVANTAGE - (I) Comprises little 4'-O-methylpyridoxin and biflavones, which can become toxic and cause side effects.
Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: **B04-A10B**

L83 ANSWER 21 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 1999-347614 [29] WPIX

DNC C1999-102325

TI Producing **Ginkgo biloba** extract from **leaves.**

DC B04

IN CHANG, M; COOPER, R; YU, Z; ZHANG, D C

PA (PHAR-N) PHARMANEX INC

CYC 83

PI WO 9926643 A1 19990603 (199929)* EN 29p A61K035-78 <--
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW
AU 9919022 A 19990615 (199944) A61K035-78 <--
EP 1033994 A1 20000913 (200046) EN A61K035-78 <--
R: AT BE DE DK ES FI FR GB IE IT NL PT SE
US 6174531 B1 20010116 (200106) A61K035-78 <--
JP 2003514761 W 20030422 (200336) 31p A61K035-78 <--

ADT WO 9926643 A1 WO 1998-US25165 19981123; AU 9919022 A AU 1999-19022 19981123; EP 1033994 A1 EP 1998-963768 19981123, WO 1998-US25165 19981123; US 6174531 B1 Provisional US 1997-66867P 19971125, US 1998-198100 19981123; JP 2003514761 W WO 1998-US25165 19981123, JP 2000-521845 19981123

FDT AU 9919022 A Based on WO 9926643; EP 1033994 A1 Based on WO 9926643; JP 2003514761 W Based on WO 9926643

PRAI US 1997-66867P 19971125; US 1998-198100 19981123

IC ICM **A61K035-78**
ICS A01N043-04; **A61K031-365**; A61K031-70; A61K031-7048; A61P043-00

AB WO 9926643 A UPAB: 19990723
NOVELTY - A process for the production of an extract from **leaves** from **Ginkgo biloba**, comprises:
(a) collecting green **Ginkgo biloba leaves** during the months of August to October;
(b) extracting at least one **lactone** and at least one **flavone** glycoside from the **leaves**; and
(c) combining the **lactone** and the **flavone** glycoside.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) an extract obtained as described above;
(2) a pharmaceutical composition comprising (1) and a carrier;
(3) a dietary supplement comprising (1) and a carrier;
(4) a process for the production of an extract from **leaves** from **Ginkgo biloba**, the process comprising:
(a) extracting at least one **lactone** and at least one **flavone** glycoside from the **leaves** using column chromatography, and
(b) combining the at least one **lactone** and the at least one **flavone** glycoside to form an extract, wherein the extract contains less than about 5 ppm of alkylphenol compounds.
USE - The process is used for the production of an extract from **leaves** from **Ginkgo biloba.**
ADVANTAGE - The process uses another effective source for the production of **Ginkgo biloba.**
Dwg.0/1

FS CPI
FA AB; DCN
MC CPI: **B04-A07E; B04-A10B**
TECH UPTX: 19990723
TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred materials: The **leaves** are collected during the months of August to September. The **Ginkgo biloba** trees are from the Shandong province of China. The **leaves** are obtained from **Ginkgo biloba** trees that are about 3-5 years of age. Prior to step (b), the **leaves** are extracted in an alcohol solution to form a crude extract from which the at least one **flavone** glycoside and the at least one **lactone** are extracted. The crude extract comprises at least 3 weight % of the **flavone** glycoside. The crude extract is **filtered**, concentrated and subsequently diluted, water-insoluble lipophilic components are subsequently removed from the **filtered** and concentrated crude extract, and the **lactone** and the **flavone** glycoside are subsequently extracted by column chromatography. The column chromatography is carried out using a column packed with 14-30 or 30-60 mesh polyamide. The percentage of alcohol in the eluent ranges from about 5-75%. The **lactone** is recovered from the alcohol eluent with an ethyl acetate solution and the ethyl acetate is subsequently removed using an ethyl alcohol solution. The process further comprises the step (d) of removing alkylphenol compounds from the combined at least one **lactone** and the at least one **flavone** glycoside to a residual content of less than about 5 ppm of **ginkgolic** acids. The extract comprises a plurality of **lactones** and a plurality of **flavone** glycosides. The **lactones** comprise **ginkgolide** A, **ginkgolide** B and **ginkgolide** C, and are combined the **flavone** glycosides and the **lactones** to form an extract comprising about 22-27 wt.% **flavone** glycosides and about 5-7 wt.% **lactones.** The concentrated crude extract has a density of about 1.20-1.25 g/cm3. The diluted extract is precipitated for about 24-48 hours at about room temperature. Lipophilic components are removed by centrifugation. Column chromatography is carried out using a column packed with 14-30 or 30-60 mesh polyamide or with a macroporous hydrophobic resin.
ABEX UPTX: 19990723
EXAMPLE - None given.

L83 ANSWER 22 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1999-302641 [25] WPIX
DNC C1999-088744
TI Clear herbal extract solution useful for encapsulation in a soft gelatin capsule.
DC A11 A25 A96 B04
IN LIN, J; OPPENHEIM, R C; TRUONG, H C

PA (SCHB) SCHERER HOLDINGS PTY LTD R P
CYC 83
PI WO 9920289 A1 19990429 (199925)* EN 29p A61K035-78 <--
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW
AU 9896162 A 19990510 (199938) A61K035-78 <--
ADT WO 9920289 A1 WO 1998-AU878 19981022; AU 9896162 A AU 1998-96162 19981022
FDT AU 9896162 A Based on WO 9920289
PRAI AU 1997-9903 19971022
IC ICM **A61K035-78**
ICS A61K009-08; A61K009-48
AB WO 9920289 A UPAB: 19990630
NOVELTY - A clear herbal extract solution suitable for encapsulation in a soft gelatin capsule, which comprises:
(i) a concentrated herbal extract (which is unsuitable by itself for direct encapsulation in a soft gelatin capsule); and
(ii) a fill liquid, which is compatible with the herbal extract and is specific for dissolving the herbal extract to form a clear solution.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(i) a soft gelatin capsule containing a clear herbal solution; and
(ii) a process for manufacturing a clear soft gelatin capsule, which comprises:
(1) combining a concentrated herbal extract and a fill liquid which is compatible with the herbal extract; and
(2) encapsulating the herbal extract in a soft gelatin capsule.
USE - The clear herbal extract solution is suitable for encapsulation in a soft gelatin capsule.
ADVANTAGE - It is possible to produce clear herbal extracts that are suitable for encapsulation in soft gelatin capsules and which also contain all the important active ingredients.
FS CPI
FA AB; DCN
MC CPI: A03-C01; A12-V01; **B04-A10**; B04-B01C1; B04-C03D
TECH UPTX: 19990630
TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred Materials: The concentrated herbal extract is preferably obtained by a cold pressing or extraction process and is a liquid or semisolid material. In particular, the concentrated herbal extract is extracted with a hydrophilic solvent (e.g. water, ethanol, methanol, acetone, ethyl acetate, glycerol, diethyl ether and/or propylene glycol). The fill liquid is hydrophilic, especially a polyethylene glycol having a molecular weight of from 300-8000, or a mixture of a polyethylene glycol with at least 1 other polyol (e.g. propylene glycol, glycerol or another polyethylene glycol, e.g. Macrogol 400) with a molecular weight 50-8000. The herbal extract is preferably globe artichoke, **Ginkgo biloba**, turmeric, soy **isoflavone**, hypericum, ginseng, Echinacea angustifolia, dong quai, black cohosh, epilobium, zizyphus and olive **leaf**. Alternatively, the concentrated herbal extract may be extracted with a hydrophobic solvent or cold pressing process. The hydrophobic solvent is an aliphatic hydrocarbon (especially hexane), an aromatic hydrocarbon (especially benzene or tuolene) and/or liquid carbon dioxide. The fill liquid is then hydrophobic and selected from a vegetable oil, a vegetable oil derivative or a medium chain triglyceride. The vegetable oil is selected from almond oil, arachis oil, borage oil, canola oil, evening primrose oil, fractionated coconut oil, lecithin, linseed oil, maize oil, olive oil, rapeseed oil, rice bran oil, safflower oil, soya bean oil, spearmint oil, sunflower oil and/or wheat germ oil. The herbal extract is then selected from ginger and saw palmetto. The carrier material is selected from

maltodextrin, dried glucose syrup or dicalcium phosphate. The shell of the capsule is either transparent, or colored to provide a clear colored shell. The capsule contains 1-1000 mg of active herbal extract. The concentrated herbal extract is selected from a concentrated extract of: Achillea millefolium (yarrow) herb, Agropyron repens (couch grass) root, Althaea officinalis (marshmallow) root, Angelica polymorpha (dong quai) root, Apium graveolens (celery) seed, Arctium lappa (burdock) root, Arctostaphylos uva-ursi (uva-ursi) **leaf**, Armoracia rusticana (horse radish) root, Artemisia annua (Chinese wormwood) herb, Astragalus membranaceus (milk vetch) root, Avena sativa (oats) herb, Barosma betulina (buchu) **leaf**, Berberis vulgaris (barberry) root, Boswellia serrata (olibanum) gum oleoresin, Calendula officinalis (marigold) flower, Camelia sinensis (green tea) **leaf**, Cassia senna (senna) fruit, Caulophyllum thalictroides (blue cohosh) root, Centaurium erythraea (centaury) herb, Centelia asiatica (gotu kola) herb, Chelidonium majus (greater celandine) herb, Cimicifuga racemosa (black cohosh) root, Cola nitida (kola) cotyledon, Crataegus laevigata (hawthorn) herb, Crataegus monogyna (hawthorn) herb, Curcuma longa (turmeric) rhizome, Cynara scolymus (globe artichoke) **leaf**, Dioscorea villosa (wild yam) root, Echinacea angustifolia root and rhizome, Echinacea purpurea (Echinacea) herb, root and rhizome, Eleutherococcus senticosus (Siberian ginseng) root, Epilobium parviflorum (small leafed willow) herb, Equisetum arvense (horsetail) herb, Eschscholtzia californica (Californian poppy) flower, Eupatorium perfoliatum (boneset) herb, Euphorbia hirta (Euphorbia) herb, Euphrasia officinalis (eyebright) herb, Filipendula ulmaria (meadowsweet) herb, Fucus vesiculosus (kelp) herb, Galium aparine (clivers) herb, Garcinia quaesita (Garcinia) fruit, Gentiana lutea (Gentian) root and rhizome, **Ginkgo biloba** (maidenhair tree) **leaf**, Glycine max (soya bean) seed, Glycyrrhiza glabra (liquorice) root, Grindelia robusta (grindelia) herb, Hamamelis virginiana (Hamamelis) **leaf**, Harpagophytum procumbens (devil's claw) root, Humulus lupulus (hops) fruit, Hydrangea arborescens (wild Hydrangea) flower, Hydrastis canadensis (golden seal) root, Hypericum perforatum (St John's Wort) herb, Ilex paraguariensis (mate) **leaf**, Inula helenium (elecampane) root, Malpighia punicifolia (acerola) fruit, Matricaria recutita (German chamomille) flower, Medicago sativa (alfalfa) **leaf**, Melissa officinalis (balm) **leaf**, Olea europaea (olive tree) **leaf**, Ononis spinosa (Spring rest-harrow) root, Orthosiphon stamineus (Java tree) **leaf**, Panax ginseng (Korean ginseng) root, Passiflora incarnate (passionflower) herb, Paullinia cupana (guarana) seed, Petroselinum crispum (parsley) seed, Peumus boidus (boldo tree) **leaf**, Piper methysticum (kava kava) root, Piscidia piscipula (Jamaica dogwood) root bark, Prunus domestics (prune) fruit, Pueraria lobata (kudzu vine) root, Rhamnus purshianus (cascara) bark, Rosa canina (dog hip rose) fruit, Rosmarinus officinalis (rosemary) **leaf**, Rumex crispus (yellow dock) root, Salix alba (white willow) bark, Salvia officinalis (sage) **leaf**, Sambucus nigra (black elder) flower, Schizandra chinensis (Chinese mongolavine) fruit, Scuteilaria lateriflora (skullcap) herb, Serenoa serrulata (saw palmetto) fruit, Silybum marianum (milk thistle) seeds, Silybum marianum (silymarine) fruit, Smilax officinalis (sarsaparilla) root/rhizome, Solidago vigaurea (golden rod) herb, Tabebuia avellanedae (pau d'arco) stem bark, Taraxacum officinale (dandelion) herb, Thymus vulgaris (common thyme) herb, Tilia cordata (lime tree) flower, Tribulus terrestris (burra gokhru) fruit, Trifolium pratense (red clover) flower, Turnera diffusa (damiana) **leaf**, Uncaria tomentosa (cat's claw) stem bark, Urtica dioica (nettle) root, Vaccinium myrtillus (bilberry) fruit, Valeriana officinalis (valerian) root, Vanilla planifolia (vanilla) fruit, Verbena officinalis (vervain) herb, Viburnum opulus (cramp bark) twig bark, Viola odorata herb, Viscum album (mistletoe) herb, Vitex agnus castus (chaste tree) fruit, Vitis vinifera (Grapeseed) seed, Withania somnifera (Winter cherry) root, Yucca elata (paimelia) root, Zanthoxylum americanum (prickly ash) bark, Zea mays (corn) styles and stigmas, Zingiber officinale

(ginger) rhizome and Zizyphus spinosa (Chinese jujube) fruit.
Preferred method: The concentrated herbal extract, and the fill liquid are preferably combined at 50-80 degrees Centigrade, and mixed with slow stirring to optimise solubilisation. The concentrated herbal extract is dispersed into a carrier material prior to combining with the fill liquid. The process comprises:
(i) dissolving the carrier material with the fill liquid to form a clear herbal solution prior to encapsulation; and/or
(ii) **filtering** any undissolved carrier material from the clear herbal solution prior to encapsulation.

ABEX UPTX: 19990630
EXAMPLE - A concentrated soft extract of ginger was extracted with liquid carbondioxide. The ginger extract was dissolved in soya bean oil to form a clear solution, which was then encapsulated. The formulation of the final product was:
(i) active fill solution:
(1) ginger extract (264mg); and
(2) soya bean oil (146mg); and
(ii) soft gelatin shell:
(1) gelatin (120mg);
(2) glycerol (53.2mg); and
(3) water (15.1mg).

L83 ANSWER 23 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1999-288165 [24] WPIX
DNC C1999-085196
TI Preparation of pharmaceutical grade **Ginkgo biloba.**
DC B04 C03 D16
IN FRIEDMAN, E P; KHWAJA, T A
PA (PHAR-N) PHARMAPRINT INC; (UYSC-N) UNIV SOUTHERN CALIFORNIA
CYC 84
PI WO 9920291 A2 19990429 (199924)* EN 95p A61K035-78 <--
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW
AU 9913633 A 19990510 (199938)
EP 1027603 A2 20000816 (200040) EN G01N033-50
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
CN 1290349 A 20010404 (200140) G01N033-50
JP 2002515402 W 20020528 (200238) 93p A61K035-78 <--
ADT WO 9920291 A2 WO 1998-US22506 19981023; AU 9913633 A AU 1999-13633 19981023; EP 1027603 A2 EP 1998-957357 19981023, WO 1998-US22506 19981023; CN 1290349 A CN 1998-812473 19981023; JP 2002515402 W WO 1998-US22506 19981023, JP 2000-516688 19981023
FDT AU 9913633 A Based on WO 9920291; EP 1027603 A2 Based on WO 9920291; JP 2002515402 W Based on WO 9920291
PRAI US 1997-956600 19971023
IC ICM **A61K035-78**; G01N033-50
ICS A61P009-00; A61P025-00; G01N033-15
AB WO 9920291 A UPAB: 19990624
NOVELTY - A method for determining whether a **ginkgo** material is a pharmaceutical grade **ginkgo**, comprising separating the **ginkgo** material to determine the biological activity and comparing it to a standard, is new.
DETAILED DESCRIPTION - The method for determining whether a **ginkgo** material is a pharmaceutical grade **ginkgo**, comprises:
(a) separating a representative aliquot of the **ginkgo** material having a bioactivity into marker fractions, wherein at least one marker fraction comprises at least one active component;

(b) determining the bioactivity of at least one marker fraction to provide a bioactivity fingerprint of the representative aliquot; and

(c) comparing the bioactivity fingerprint of the representative aliquot to a bioactivity fingerprint standard which has been established for a pharmaceutical grade **ginkgo** to determine whether the **ginkgo** material is a pharmaceutical grade **ginkgo**.

INDEPENDENT CLAIMS are also included for the following:

(1) a method for determining whether a **ginkgo** material is a pharmaceutical grade **ginkgo**, comprises:

(a) providing the **ginkgo** material, which **ginkgo** material comprises components having a bioactivity, where at least one component has a standardized bioactivity profile;

(b) separating a representative aliquot from the **ginkgo** material into marker fractions, where at least one marker fraction comprises at least one active component;

(c) measuring an amount of at least one active component in at least one marker fraction;

(d) calculating the bioactivity of at least one marker fraction based on the amount of at least one active component present and the standardized bioactivity profile to provide a calculated bioactivity fingerprint of the representative aliquot; and

(e) comparing the calculated bioactivity fingerprint of the representative aliquot to a bioactivity fingerprint standard which has been established for a pharmaceutical grade **ginkgo** to determine whether the **ginkgo** material is a pharmaceutical grade **ginkgo**;

(2) a method for determining whether a **ginkgo** material is a pharmaceutical grade **ginkgo**, comprising:

(a) determining a total bioactivity of a representative aliquot of the **ginkgo** material with a bioassay selected from a GABAA assay, a GABA benzodiazepine central assay, a leukotriene C4 synthetase assay, a 5-lipoxygenase assay, and a monoamine oxidase A assay; and

(b) comparing the total bioactivity of the representative aliquot with a total bioactivity standard to determine whether the **ginkgo** material is a pharmaceutical grade **ginkgo**; and

(3) a pharmaceutical grade **gingko** obtained by the methods above.

ACTIVITY - Antithrombotic; Antihypertensive; Anticancer; Vasodilator.

Platelets of male or female New Zealand derived albino rabbits weighing 2.5-3.0 kg were prepared in modified Tris-HCl pH 7.5 buffer using standard techniques. A 50 pg aliquot of membrane is incubated with 0.4 nM (3H)-platelet activating factor (PAF) for 60 minutes at 25 deg. C. Non-specific binding was estimated in the presence of 1 micro M PAF. Labeled membranes were trapped on glass **filters** and washed 3 times to remove un-liganded label. The **filters** were counted in a liquid scintillation counter to determine the amount of specifically bound (3H)-PAF. Compounds were initially screened at a 10 micro M concentration. Commercially available **ginkgolides** A, B and C and **bilobalide** served as extract and fraction compound controls. **Ginkgolide** A had an IC50 of 9.4 x 10-7 M, **Ginkgolide** B had an IC50 of 2. 5 x 10-7 M and **Ginkgolide** C had an IC50 of 1.7 x10-5 M.

MECHANISM OF ACTION - None given.

USE - The pharmaceutical grade **ginkgo** is used for treating or ameliorating a cardiovascular disorder, or for treating or ameliorating a psychological disorder (all claimed).

ADVANTAGE - The process ensures that only **gingko** of a constant quality is used for the treatment of cardiovascular disorders and psychological disorders. It provides the means of isolating the essentially active parts of the plant, while discarding non-essential parts of the plant.

FS CPI

FA AB; DCN

MC CPI: **B04-A10**; B14-F02; **C04-A10**; C14-F02; D05-H09
TECH UPTX: 19990624
TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred materials: At least one marker fraction contains at least one active component. The **ginkgo** material is an alcoholic extract, an aqueous or organic extract, a supercritical carbon dioxide extract, an oil, a powdered plant material, a homogeneous material or a mixture of plant materials. The active component is a **lactone** (especially **ginkgolide** A, B or C, or a **bilobalide**), **amentoflavone**, anacardic acid, gamma-aminobutyric acid, glutamic acid, glutamine, **hinokiflavone**, isorhamnetin, kaempferol, proline or quercetin.
Preferred methods: The methods for determining whether a **ginkgo** material is a pharmaceutical grade **ginkgo** also comprises the steps:
(a) determining an amount of an active component in at least one marker fraction to provide a quantitative compositional fingerprint of the representative aliquot; and
(b) comparing the quantitative compositional fingerprint of the representative aliquot to a quantitative compositional fingerprint standard which has been established for a pharmaceutical grade **ginkgo** to determine whether the **ginkgo** material is a pharmaceutical grade **ginkgo.**
Alternatively, the method comprises the additional steps:
(a) determining a total bioactivity of the representative aliquot of the **ginkgo** material; and
(b) comparing the total bioactivity of the representative aliquot with a total bioactivity standard to determine whether the **ginkgo** material is a pharmaceutical grade **ginkgo.**
The method may also comprise:
(a) separating a representative aliquot from the **ginkgo** material into marker fractions, where at least one marker fraction comprises at least one active component;
(b) determining an amount of an active component in at least one marker fraction to provide a quantitative compositional fingerprint of the representative aliquot; and
(c) comparing the quantitative compositional fingerprint of the representative aliquot to a quantitative compositional fingerprint standard which has been established for a pharmaceutical grade **ginkgo** to determine whether the **ginkgo** material is a pharmaceutical grade **ginkgo.**

L83 ANSWER 24 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1999-278295 [24] WPIX
DNC C1999-081914
TI **Ginkgo leaf** liquor - used to promote blood circulation.
DC B04 D16
IN ZHANG, J
PA (YIGU-N) YIGUANG HEALTH CARE PROD FACTORY ZHONGZH
CYC 1
PI CN 1206742 A 19990203 (199924)* 1p C12G003-04
ADT CN 1206742 A CN 1997-115027 19970724
PRAI CN 1997-115027 19970724
IC ICM C12G003-04
ICS **A61K035-78**
AB CN 1206742 A UPAB: 19990630
The present invention relates to a health-care **ginkgo leaf** liquor and its method of preparation. The dried **ginkgo leaf** richly containing **flavone** and biolobalide and crataegus pinnatifida are pulverized, distilled liquor is added, heat-insulated for 1-3 hours. It is **filtered**, then the **filtrate** is diluted with water, left to settle, and insoluble residue is removed by **filtration**, then the distilled liquor is

added to regulate the concentration of the **filtrate**, and the honey and cane sugar are added, stood still and **filtered** so as to obtain the invented finished liquor. The product is used to boost qi and freeing the vessels, promoting circulation of blood and reducing fat, raising oxygen supply for heart muscle, resisting platelet agglutination, reducing cholesterol and improving memory, and free from any side effect.

FS CPI
FA AB
MC CPI: B04-A08C2; **B04-A10**; B14-D02A2; B14-F02; B14-F06; B14-J01A4; D05-E

L83 ANSWER 25 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1997-294865 [27] WPIX
DNC C1997-095224
TI Glutathione-S-transferase containing **Gingko biloba leaves** - is useful for glutathione-S-transferase activating food, drinks or pharmaceuticals.
DC B04 D13
PA (NIGR-N) NIPPON GREEN WAVE KK
CYC 1
PI JP 09110713 A 19970428 (199727)* 5p A61K035-78 <--
ADT JP 09110713 A JP 1995-265843 19951013
PRAI JP 1995-265843 19951013
IC ICM **A61K035-78**
ICS A23L001-30; A23L002-38; A23L002-52; **A61K031-365**
ICA C07D493-14; C07D493-22
AB JP 09110713 A UPAB: 19970702
Glutathione-S-transferase activator comprises extract of **Ginkgo biloba leaves.** Also claimed are: (A) a glutachione-S-transferase activator comprising bilohalide; (B) a glutathione-S-transferase activator comprising **ginkgolide** A; and (C) a glutathione-S-transferase activator comprising an extract of **Gingko biloba leaves** and bilohalide, **ginkgolide** A, or th both. USE/ADVANTAGE - Used for glutathione-S-transferase activating food and drinks or pharmaceuticals. The activator prevents cancer. In an example, to crushed dry **Gingko biloba leaves** (500g), 70% aqueous ethanol (2500 ml) was added. The mixture was heated to 50 deg.C for 30 hours and **filtered** to give a first extract and a first extraction residue. To the first extraction residue, 70% aqueous etanol (2000ml) was added. The mixture was heated to 50 deg.C for 3 hours and **filtered** to give a second extract and a second extraction residue. To the second extraction residue, 70% aqueous ethanol (2000ml) was added, and the mixture was heated to 50 deg.C for 3 hours and **filtered** to give a third extract and a third extraction residue. The first, second, and third extract were mixed (total 6000ml) and concentrated under reduced pressure to approximately 500ml. To the concentrate water (500ml) was added and the mixture was stirred and **filtered** to separate th precipitated hydrophobic substances. The resulting **filtrate** was loaded onto a column packed with unsubstituted porous resin (HP-20) (500ml) to adsorb the desired extract. The column was washed with water (1000ml). The extract was eluted with 70% aqueous ethanol (1000ml). The eluant (1000ml) was concentrated to dryness under reduced pressure to give the extract of **Gingko biloba leaves** (15g) containing **flavone** glycoside (24%) and terpenoid (6%).
Dwg.0/0
FS CPI
FA AB
MC CPI: B04-A08C2; **B04-A10B**; B14-E11; B14-H01; B14-L01; D03-H01G; D03-H01T2

L83 ANSWER 26 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1996-497369 [49] WPIX

DNC C1996-155441
TI Extracts of **ginkgo biloba leaves** containing **flavonoid**(s) and which are free from terpene(s) - useful as flavouring in dairy prods. such as yoghurt(s), as well as refreshing and nutritional non-alcoholic drinks, sweets and chewing gum.
DC B04 D13
IN OREILLY, J; O REILLY, J; O'REILLY, J
PA (SCRC) SCRAS SOC CONSEILS RECH APPL SCI; (SCRC) SOC CONSEILS RECH & APPL SCI; (SCRC) SCRAS SOC CONSEILS RECH & APPL SCI
CYC 71
PI WO 9633728 A1 19961031 (199649)* FR 15p A61K035-78 <--
RW: AT BE CH DE DK EA ES FI FR GB GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG
W: AL AM AT AU AZ BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU IS JP KE KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG US UZ VN
AU 9657679 A 19961118 (199710) A61K035-78 <--
NO 9704944 A 19971024 (199805) A23L001-221
EP 822825 A1 19980211 (199811) FR A61K035-78 <--
R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU NL PT SE
CZ 9703285 A3 19980218 (199813) A23L001-221
HU 9900009 A2 19990329 (199921) A61K035-78 <--
JP 11504514 W 19990427 (199927) 16p A23L001-221
BR 9608301 A 19990615 (199929) A61K035-78 <--
AU 706453 B 19990617 (199935) A61K035-78 <--
MX 9708202 A1 19971201 (199936) A61K035-78 <--
NZ 308133 A 19991028 (199953) A61K035-78 <--
KR 99008066 A 19990125 (200014) A61K035-78 <--
RU 2163254 C2 20010220 (200123) C11B009-02
US 6242030 B1 20010605 (200133) A23L001-22
US 2001043976 A1 20011122 (200176) A23L001-22
CN 1185113 A 19980617 (200254) A61K035-78 <--
NO 314683 B1 20030505 (200333) A23L001-221
ADT WO 9633728 A1 WO 1996-FR653 19960429; AU 9657679 A AU 1996-57679 19960429; NO 9704944 A WO 1996-FR653 19960429, NO 1997-4944 19971024; EP 822825 A1 EP 1996-914261 19960429, WO 1996-FR653 19960429; CZ 9703285 A3 WO 1996-FR653 19960429, CZ 1997-3285 19960429; HU 9900009 A2 WO 1996-FR653 19960429, HU 1999-9 19960429; JP 11504514 W JP 1996-532235 19960429, WO 1996-FR653 19960429; BR 9608301 A BR 1996-8301 19960429, WO 1996-FR635 19960429; AU 706453 B AU 1996-57679 19960429; MX 9708202 A1 MX 1997-8202 19971024; NZ 308133 A NZ 1996-308133 19960429, WO 1996-FR653 19960429; KR 99008066 A WO 1996-FR653 19960429, KR 1997-707590 19971025; RU 2163254 C2 WO 1996-FR653 19960429, RU 1997-119468 19960429; US 6242030 B1 WO 1996-FR653 19960429, US 1997-945565 19971105; US 2001043976 A1 Div ex WO 1996-FR653 19960429, Div ex US 1997-945565 19971105, US 2001-837519 20010418; CN 1185113 A CN 1996-194075 19960429; NO 314683 B1 WO 1996-FR653 19960429, NO 1997-4944 19971024
FDT AU 9657679 A Based on WO 9633728; EP 822825 A1 Based on WO 9633728; CZ 9703285 A3 Based on WO 9633728; HU 9900009 A2 Based on WO 9633728; JP 11504514 W Based on WO 9633728; BR 9608301 A Based on WO 9633728; AU 706453 B Previous Publ. AU 9657679, Based on WO 9633728; NZ 308133 A Based on WO 9633728; KR 99008066 A Based on WO 9633728; RU 2163254 C2 Based on WO 9633728; US 6242030 B1 Based on WO 9633728; US 2001043976 A1 Div ex US 6242030; NO 314683 B1 Previous Publ. NO 9704944
PRAI GB 1995-8533 19950427
REP 4.Jnl.Ref; EP 360556; EP 431536; EP 436129; EP 543051; EP 577143; FR 2007352; JP 62205028; JP 7048267; KR 9402796
IC ICM A23L001-22; A23L001-221; **A61K035-78**; C11B009-02
ICS A23C009-00; A23C009-123; A23C009-13; A23G003-00; A23G003-30; A23L001-00; A23L001-03; A23L002-00; A23L002-52; C11B009-00
ICA C07D311-30; C07D311-32; C07H017-065
AB WO 9633728 A UPAB: 19961205
**Flavonoid** extracts of **leaves** of **Ginkgo**

**biloba**, which are substantially free from terpenes, are new.

The extracts pref. contain at least 0.5% and at the most 1% terpenes and 28-35% **flavonoid** heterosides.

USE - The extracts are useful in flavouring food, partic. dairy prods. such as yoghurts, as well as refreshing and nutritional non-alcoholic drinks, sweets and chewing gum (all claimed).

In an example, **ginkgo biloba leaves** were extracted with 6-12 pts. 60:40 acetone and water at 50-60 deg.C. The extract was concentrate to reduce the acetone content to < 3%. The solution was cooled and lipids were eliminated by decantation. The aqueous solution was then extracted with 2-5 pts. ethyl acetate containing up to 20% heptane. The resulting solution was extracted with a minimal quantity of acetone/butanol (acetone content up to 15%) in presence of ammonium sulphate. The organic phase was concentrate twice and insoluble material was **filtered** off and the solution concentrate to dryness giving the extract in the form of a homogeneous powder. In tests, it was found that the natural astringent properties of the extract balances the basic flavour of dairy prods. by decreasing the acidity found in conventional prods. The extracts complement dairy and fruity notes.

Dwg.0/0

FS CPI
FA AB
MC CPI: **B04-A10B**; B14-E11; D03-B09; D03-H01C

L83 ANSWER 27 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1996-426088 [43] WPIX
DNC C1996-134305
TI Compsn. containing **Gingko biloba** extract, acid and (bi)carbonate - to give aqueous compsn. stable for one hour, for treating circulation disorders.
DC B04
IN **OSCHMANN, R**
PA (SCHW-N) **SCHWABE GMBH & CO WILLMAR**
CYC 20
PI DE 19509856 A1 19960919 (199643)* 3p A61K035-78 <--
WO 9629085 A1 19960926 (199644) DE 11p A61K035-78 <--
RW: AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: JP US
DE 19509856 C2 19970911 (199740) 3p A61K035-78 <--
EP 814824 A1 19980107 (199806) DE A61K035-78 <--
R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
JP 11502214 W 19990223 (199918) 9p A61K035-78 <--
EP 814824 B1 20010509 (200128) DE A61K035-78 <--
R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
DE 59606882 G 20010613 (200134) A61K035-78 <--
ES 2157429 T3 20010816 (200156) A61K035-78 <--
US 6399099 B1 20020604 (200242) A61K009-46
ADT DE 19509856 A1 DE 1995-19509856 19950317; WO 9629085 A1 WO 1996-EP1135 19960315; DE 19509856 C2 DE 1995-19509856 19950317; EP 814824 A1 EP 1996-907489 19960315, WO 1996-EP1135 19960315; JP 11502214 W JP 1996-528064 19960315, WO 1996-EP1135 19960315; EP 814824 B1 EP 1996-907489 19960315, WO 1996-EP1135 19960315; DE 59606882 G DE 1996-506882 19960315, EP 1996-907489 19960315, WO 1996-EP1135 19960315; ES 2157429 T3 EP 1996-907489 19960315; US 6399099 B1 WO 1996-EP1135 19960315, US 1997-913896 19970917
FDT EP 814824 A1 Based on WO 9629085; JP 11502214 W Based on WO 9629085; EP 814824 B1 Based on WO 9629085; DE 59606882 G Based on EP 814824, Based on WO 9629085; ES 2157429 T3 Based on EP 814824; US 6399099 B1 Based on WO 9629085
PRAI DE 1995-19509856 19950317
REP JP 7069862
IC ICM A61K009-46; **A61K035-78**
ICS A61K009-00; A61K009-16

AB DE 19509856 A UPAB: 19961025
Sparkling compsn. contains **Ginkgo biloba** dry extract and a sparkling mixture of a physiologically acceptable acid (or its sodium salt) and a carbonate or hydrogen carbonate, in proportions such that the resulting solution has a pH of 6-8 and is stable for at least one hour.
USE - The compsn. is used to treat peripheral and cerebral circulation disorders.
ADVANTAGE - The compsn. forms a clear solution that is stable for sufficient time to prevent degradation or precipitation of valuable components.
Dwg.0/0
FS CPI
FA AB; DCN
MC CPI: B04-A08C1; **B04-A10B**; B04-C03C; B05-C04; B10-A09B; B10-C02; B12-M09; B14-F02

L83 ANSWER 28 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1996-018388 [02] WPIX
DNC C1996-006216
TI Isolation and purificn. of **gingkolides** from **gingko leaves** - comprises, e.g. defatting aqueous **gingko leaves** extract with hexane or cyclohexane and adsorbing impurities with activated carbon.
DC B03 B04
IN KWAK, U; OH, K; PARK, H
PA (SUNK-N) SUN KYONG IND LTD
CYC 1
PI KR 9402796 B1 19940402 (199602)* A61K035-78 <--
ADT KR 9402796 B1 KR 1989-8341 19890616
PRAI KR 1989-8341 19890616
IC ICM **A61K035-78**
AB KR 9402796 B UPAB: 19960115
The method comprises: (a) degreasing an aqueous solution of an extract of **gingko** tree **leaves** with hexane or cyclohexane; (b) extracting the residual aqueous solution layer with a nonpolar solvent to dry to powder; (c) dissolving the obtd. powder in a lower ketone or alcohol; (d) adding activated carbon to the solution to adsorb the impurities, **filtrating** it and concentrating it to obtain a powder mixture of **gingkolides**; and (e) dissolving the mixture in a mixture solvent of a lower acetate and a lower alcohol and purifying it with an adsorption column of activated carbon and silica gel.
FS CPI
FA AB
MC CPI: **B04-A07E**

L83 ANSWER 29 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1995-228625 [30] WPIX
CR 2003-486260 [46]
DNC C1995-105323
TI **Gingko leaves** extracts, useful as medicine or food additives - contain **flavone** glycoside and only small amts of quercetin and salicylic acid derivative.
DC B04 D13
PA (DAIL) DAICEL CHEM IND LTD
CYC 1
PI JP 07138171 A 19950530 (199530)* 12p A61K035-78 <--
JP 3518882 B2 20040412 (200425) 12p A61K035-78 <--
ADT JP 07138171 A JP 1993-307158 19931112; JP 3518882 B2 JP 1993-307158 19931112
FDT JP 3518882 B2 Previous Publ. JP 07138171
PRAI JP 1993-307158 19931112
IC ICM **A61K035-78**
ICS A23L001-30; A61P009-10; A61P025-28

AB JP 07138171 A UPAB: 20040418
Extracts of **gingko leaves** comprise more than 15 wt% **flavone** glycoside, less than 0.02 wt% quercetin and less than 30 ppm salicylic acid derivative

Also claimed are (A) the prepn of the extracts of **gingko leaves** comprising (1) ext using less than 55 vol% of aq alcohol, (2) adsorbing the obtd extracts, (3) eluting the absorbed substance and (4) concn of the eluted soln; (B) the prepn comprising (1) extracting, (2) adsorbing the obtd extracts using hydrophobic synthetic resin absorbent, (3) eluting using solvent of pH more than 9.5 and (4) concn; (C) the prepn comprising (1) extracting, (2) adsorbing, (3) eluting using solvent of Ph more than 9.5, contg 0-15 vol% alcohol, and (4) concn; (D) the prepn of the extracts comprising concn of the sepd soln contg **gingko leaves** extracts at less than 80 deg C; (E) the prepn of the extracts comprising concn of the sepd soln contg **gingko leaves** extracts at pH 6-8; and (F) the prepn of the extracts comprising concn of the sepd soln contg **gingko leaves** extracts under inert gas atmosphere.

The amt of **flavone** glycoside is more than 30 wt%. The extracts are adsorbed under acidic conditions. The eluting solvent is less than 55 vol% aq alcohol. Alcohol is pref 1-3C monohydric alcohol. The pH of eluting solvent is pref more than 10. The eluting solvent is pref aq solvent and contains 0-15 vol% alcohol.

USE - The **gingko leaves** extracts are useful as medicine or food additives. They are very safe because contents of both salicylic acid deriv and quercetin are very small. They are obtd easily in high yield.

In an example, to **gingko leaves** (150 g) was added water (2000 ml), and the whole wax extracted at 90 deg C for 3 hrs to separate the residue, to which water (1000 ml) was added, followed by heating at 90 deg C for 1.5 hrs. The two obtd **filtrates** were combined and **filtered** using Celite (15g). Hydrophobic synthetic resin adsorbent (Amberlite XAD-2000) (15 ml) was filled in a column through which the obtd **filtrate** (440 ml) was passed at a space velocity of 2/hr. After washing the column, 40 vol% of aq ethanol soln (75 ml) was passed, and the adsorbed substance was eluted. The eluted soln was conc at 40-50 deg C to give 320 mg of **gingko leaves** extracts (1.45 wt%), which contained 17.8 wt% of **flavone** glycoside. The amt of quercetin was less than 0.001 wt% and that of salicylic acid deriv was less than 1 ppm.

Dwg.0/1

FS CPI
FA AB
MC CPI: **B04-A10B**; D03-H01T

L83 ANSWER 30 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1994-354650 [44] WPIX
DNC C1994-161667
TI Water-soluble **gingko leaf** extract useful for drinks or beauty wash - contains terpene **lactone**(s) and **flavone** glycoside.
DC B04 D13
PA (NIGR-N) NIPPON GREEN WAVE KK; (YAKU-N) YAKUKEN YG
CYC 1
PI JP 06279300 A 19941004 (199444)* 5p A61K035-78 <--
ADT JP 06279300 A JP 1993-91879 19930329
PRAI JP 1993-91879 19930329
IC ICM **A61K035-78**
ICS A23L001-30
AB JP 06279300 A UPAB: 19941223
Water-soluble **gingko leaf** extract contains 20% or more of **flavone** glycoside and 5.6% or more of terpene **lactones**.

Also claimed is preparation of the water-soluble **gingko leaf** extract comprising (a) mixing a water-insol. **gingko leaf** extract extracted using a water-containing organic solvent, with water or a water-containing organic solvent; (b) adding basic cpd. to mixture at 30 deg.C or less to adjust pH 6.0-7.0 or adding basic cpd. to mixture at 80 deg.C or less to adjust pH 5.0-6.0; and (c) **filtered** mixture and concentrate and dried **filtrate.**

Pref., the water-insol. **gingko leaf** extract is prepared by (1) extracting dried **gingko leaves** with 40-80% ethanol-containing water at warm; (2) concentrating extract to 1/2 volume, and **filtering** the concentrate; (3) contacting **filtrate** to an unsubstd. gp.-type porous resin to adsorb **gingko leaf** extract, washing the resin with water, and contacting the resin with aqueous solution containing 60% or more of ethanol to desorb the extract; and (4) concentrating eluate to dryness.

USE/ADVANTAGE - The water-soluble extract containing higher concentration of effective components is simply obtd. A parenteral solution, various drinks and a beauty wash are easily prepared from water-soluble extract.

In an example, a commercial water-insol. **gingko leaf** extract (10g) containing 24.9% of **flavone** glycoside and total 6.5% of terpene **lactones** was dispersed in purified water (50ml) with stirring. To the dispersion was dropwise added 10% KHCO3 to adjust pH 6.3. To mixture was added a **filter** aid (5g) and **filtered.** The **filtrate** was concentrate in vacuo to obtain a brown powder (9.8g) of which 1g was completely dissolved in water (100ml). Dwg.0/0

FS CPI
FA AB; GI
MC CPI: B04-A08C2; **B04-A10**; B06-A01; B14-E11; B14-R01; D03-H01G

L83 ANSWER 31 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1993-236760 [30] WPIX
DNC C1993-105430
TI **Flavonoid** extract prodn from **gingko biloba leaves** - by repeated extn with mixts of organic solvents and water.
DC B04 D21
PA (EURO-N) EUROMED SA
CYC 1
PI ES 2036951 A1 19930601 (199330)* A61K035-78 <--
ES 2036951 B1 19940116 (199407) A61K035-78 <--
ADT ES 2036951 A1 ES 1991-2679 19911129; ES 2036951 B1 ES 1991-2679 19911129
PRAI ES 1991-2679 19911129
IC ICM **A61K035-78**
AB ES 2036951 A UPAB: 19931118

The **leaves** are extracted with an aqueous lower ketone or alcohol solution and the solvent removed, leaviong a soft extract. This is dissolved in a mixture of water and organic solvent with limited miscibility, and then extracted with the same solvent saturated with water. After concentration the remaining extract is opt. treated to remove lipoid components, and dissolved in a lower alcohol, **filtered** and concentrated.

Treatment with aqueous ammonium sulphate solution together with a lower alcohol and ketone, leads to an organic phase from which the solvent is evaporated. The dry product consists of 15-40% **gingko** flavanoids with a maximum of 1.5% prodelphinidines and 10% proanthoacinidines.

USE - Used for treatment of cerebral circulation deficiency and for local cosmetic prepns.

FS CPI
FA AB
MC CPI: **B04-A07F2**; B12-C10; B12-E01; B12-L02; D08-B

L83 ANSWER 32 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1993-227036 [28] WPIX
DNC C1993-101058
TI Use of **bilobalid** or **Ginkgo biloba** extract - for the treatment of anxiety, depression and tension.
DC B02
IN CHATTERJEE, S; NOELDNER, M; CHATTERJEE, S S
PA (SCHW-N) **SCHWABE GMBH & CO WILLMAR**
CYC 18
PI WO 9312784 A1 19930708 (199328)* DE 25p A61K031-365
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
W: JP US
EP 618797 A1 19941012 (199439) DE
R: DE FR GB IT
JP 07502522 W 19950316 (199519) 7p A61K031-365
US 6022889 A 20000208 (200014) A61K031-34
EP 618797 B1 20000315 (200018) DE A61K031-365
R: DE FR GB IT
DE 59209823 G 20000420 (200026) A61K031-365
JP 3188461 B2 20010716 (200142) 10p A61K031-365
ADT WO 9312784 A1 WO 1992-EP2981 19921222; EP 618797 A1 WO 1992-EP2981 19921222, EP 1993-901748 19921222; JP 07502522 W WO 1992-EP2981 19921222, JP 1993-511428 19921222; US 6022889 A WO 1992-EP2981 19921222, US 1994-244900 19940714; EP 618797 B1 WO 1992-EP2981 19921222, EP 1993-901748 19921222; DE 59209823 G DE 1992-509823 19921222, WO 1992-EP2981 19921222, EP 1993-901748 19921222; JP 3188461 B2 WO 1992-EP2981 19921222, JP 1993-511428 19921222
FDT EP 618797 A1 Based on WO 9312784; JP 07502522 W Based on WO 9312784; US 6022889 A Based on WO 9312784; EP 618797 B1 Based on WO 9312784; DE 59209823 G Based on EP 618797, Based on WO 9312784; JP 3188461 B2 Previous Publ. JP 07502522, Based on WO 9312784
PRAI DE 1991-4142878 19911223
REP 4.Jnl.Ref; EP 143977; GB 2023421; JP 02031646; US 4571407
IC ICM A61K031-34; A61K031-365
ICS **A61K035-78**; A61P025-22; A61P025-24
ICA C07D493-14
AB WO 9312784 A UPAB: 19931116
Use of **bilobalid** (I), or of a **Ginkgo biloba** extract enriched in (I), as an anxiolytic agent is new.
USE - (I), or the extract, is useful for treatment or prevention of anxiety, tension and depression. It has an anxiolytic action largely similar to that of diazepam or buspiron. (I) is already known for treatment of degenerative nervous disorders.
Formulations are conventional tablets, solns., capsules, etc. and daily doses are 5-40 mg (I) orally or 0.5-5 mg parenterally. A typical tablet contains 5 mg pure (I); 58.5 mg lactose; 18 mg microcrystalline cellulose; 18 mg corn starch and 0.5 mg Mg stearate.
Dwg.0/3
FS CPI
FA AB; GI; DCN
MC CPI: B06-A03; B12-C06; B12-C10

L83 ANSWER 33 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1993-183404 [23] WPIX
DNC C1993-081223
TI Slow-release micro-tablets containing dry extract of vegetable origin - e.g. **gingkolide** B or aesculus extract and glyceride, fatty alcohol and/or wax as lipophilic auxiliary.
DC B04 B07
IN SCHWABE, K
PA (SCHW-N) **SCHWABE GMBH & CO WILLMAR**
CYC 1
PI DE 4139118 A1 19930603 (199323)* 4p A61K009-22

ADT DE 4139118 A1 DE 1991-4139118 19911128
PRAI DE 1991-4139118 19911128
IC ICM A61K009-22
ICS A61K009-52
AB DE 4139118 A UPAB: 19931115
Microtablets comprise a compacted mixture of active agents and auxiliaries and have a diameter of at most 3mm. Tablet comprises (a) vegetable active agents in the form of at least one dry vegetable extract which makes up 30 weight % of the total weight of the tablet, and (b) at least one lipophilic auxiliary selected from glycerides, fatty alcohols and waxes.
USE/ADVANTAGE - The neurotablets can be used as phytopharmaceuticals in multi-unit-dose systems. They can be filled into hard gelatin capsules with conventional filling machines.
Dwg.0/0
FS CPI
FA AB; DCN
MC CPI: **B04-A07F2**; B04-B01C1; B10-E04C; B10-G02; B12-M11C

L83 ANSWER 34 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1992-265118 [32] WPIX
DNC C1992-118408
TI Preparation of extract of **gingko leaf** having good medicinal effects - by extracting dried **leaves** with ethanol solution, condensing extracted liquid, contacting **filtered** liquid with unsubstituted porous resin, etc..
DC B04 D13
PA (UMED-I) UMEDA S
CYC 1
PI JP 04182434 A 19920630 (199232)* 4p A61K035-78 <--
JP 2996716 B2 20000111 (200007) 3p A61K035-78 <--
ADT JP 04182434 A JP 1990-312175 19901117; JP 2996716 B2 JP 1990-312175 19901117
FDT JP 2996716 B2 Previous Publ. JP 04182434
PRAI JP 1990-312175 19901117
IC ICM **A61K035-78**
ICS A23L001-30
ICA A61P009-00
AB JP 04182434 A UPAB: 19931025
In the preparation of an extract of **ginkgo leaf** containing at least 20% of **flavone** glycosides, the dried **leaves** are extracted, while warming, with 40-80% aqueous ethanol solution. The extracted liquid is condensed to up to one-half of the original volume, cooled and **filtrated.** The **filtrate** is contacted with an unsubstd. type porous resin to adsorb the extract. After washing with water, the resin is contacted with at least 60% aqueous ethanol solution to desorb the extract. Alternatively, the resin is contacted with 10-40% aqueous ethanol solution and then with at least 60% aqueous ethanol solution to desorb in order. The
eluate obtd. by the desorption is condensed to dryness to obtain the extract containing at least 20% of the glycosides.
Pref., a water-soluble high mol. cpd(s). and/or polyglycerol fatty acid ester(s) is added to the aqueous ethanol solution and dried to obtain the extract having good water dispersibility.
USE/ADVANTAGE - Using safe ethanol as the solvent, the simple method gives high yield and high quality. The extract obtd. has good medicinal effects. The addition of the high mol. cpds. and/or the esters gives good water dispersibility.
Dwg.0/0
FS CPI
FA AB
MC CPI: B04-A07D5; D03-H01T

L83 ANSWER 35 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 1992-106361 [14] WPIX
DNC C1992-049649
TI New extract from **Ginkgo** Bilda **leaves** - suitable for intravenous injection or infusion, and has no serum-precipitating and/or haem agglutinating properties.
DC B04
IN SCHWABE, K P; SCHWABE, K
PA (SCHW-N) **SCHWABE GMBH & CO WILLMAR**; (SCHW-N) **SCHWABE W & CO GMBH**; (SCHW-N) **SCHWABE GMBH & CIE WILLMAR**
CYC 18
PI EP 477968 A 19920401 (199214)* 9p
R: AT BE CH DE DK ES FR GB GR IT LU NL SE
DE 4030758 A 19920402 (199215) 5p
CA 2052392 A 19920329 (199225) A61K031-70
JP 04288019 A 19921013 (199247) 5p A61K035-78 <--
EP 477968 B1 19950503 (199522) EN 11p A61K035-78 <--
R: AT CH DE ES FR GB GR IT LI NL
DE 69109426 E 19950608 (199528) A61K035-78 <--
JP 07076177 B2 19950816 (199537) 6p A61K035-78 <--
ES 2077130 T3 19951116 (199551) A61K035-78 <--
US 5512286 A 19960430 (199623) 7p A61K035-78 <--
KR 154984 B1 19981116 (200029) A61K035-78 <--
CA 2052392 C 20020716 (200256) EN A61K031-70
ADT EP 477968 A EP 1991-116551 19910927; DE 4030758 A DE 1990-4030758 19900928; CA 2052392 A CA 1991-2052392 19910927; JP 04288019 A JP 1991-249122 19910927; EP 477968 B1 EP 1991-116551 19910927; DE 69109426 E DE 1991-609426 19910927, EP 1991-116551 19910927; JP 07076177 B2 JP 1991-249122 19910927; ES 2077130 T3 EP 1991-116551 19910927; US 5512286 A Cont of US 1991-766929 19910927, US 1994-200378 19940223; KR 154984 B1 KR 1991-16973 19910928; CA 2052392 C CA 1991-2052392 19910927
FDT DE 69109426 E Based on EP 477968; JP 07076177 B2 Based on JP 04288019; ES 2077130 T3 Based on EP 477968
PRAI DE 1990-4030758 19900928
REP 3.Jnl.Ref; DE 2117429; EP 303277; EP 352146; JP 02104530; JP 62029517; JP 62292794; US 4753929
IC ICM A61K031-70; **A61K035-78**
ICS A61K009-14; A61K009-19; B01D011-02
AB EP 477968 A UPAB: 19950626
Extracts from the **leaves** of **Ginkgo biloba** containing most of the flavone glycosides, **ginkgolides** and **bilobalide** originally present in the **leaves** are free of components of the **leaves** which have serum-precipitating and/or haemagglutinating properties.

Pref. the extract contains 20-30 weight% (especially 22-26) flavone glycosides, 2.5-4.5 weight% **ginkgolides** A, B, C and J in total, 2.0-4.0 weight% **bilobalide** and less than 10ppm (especially less than 1 ppm) alkylphenol cpds.

USE/ADVANTAGE - The extract is especially useful for the preparation of pharmaceuticals, pref. in ampoule form, for intravenous (IV) admin. e.g. IV injection or infusion, as it does not contain components disturbing IV admin. e.g. serum-precipitating and/or haemagglutinating compounds.

0/0
Dwg.0/0
FS CPI
FA AB
MC CPI: **B04-A07F2**; B12-H04
ABEQ EP 477968 B UPAB: 19950609
Extract from the **leaves** of **Ginkgo biloba** containing most of the flavone glycosides, **ginkgolides** and **bilobalide** originally present in the **leaves**, characterised in that it is essentially free of components of the **leaves** with serum-precipitating and/or haemagglutinating properties.

Dwg.0/0
ABEQ US 5512286 A UPAB: 19960610
An extract from the **leaves** of **Ginkgo biloba** containing most of the flavone glycosides, **gingkolides** and **bilobalide** originally present in the **leaves**, comprising 20 to 30 weight percent flavone glycosides, 2.5 to 4.5 weight percent **gingkolides** selected from the group consisting of **gingkolide** A, B, C and J and mixtures thereof, 2.0 to 4.0 weight percent **bilobalide** and less than 10 ppm alkylphenol compounds, said extract being essentially free of components of the **leaves** with serum-precipitating or haemagglutonating properties.
Dwg.0/0

L83 ANSWER 36 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1991-172350 [24] WPIX
DNC C1991-074470
TI Extracts from **Ginkgo biloba leaves** - with high content of flavone glycoside(s) and **ginkgolide**(s) but with low alkyl phenol(s) content.
DC B04
IN SCHWABE, K P
PA (SCHW-N) **SCHWABE W & CO GMBH**
CYC 1
PI DE 3940095 A 19910606 (199124)*
ADT DE 3940095 A DE 1989-3940095 19891204
PRAI DE 1989-3940095 19891204
IC **A61K035-78**
AB DE 3940095 A UPAB: 19930928
Novel extracts from the **leaves** of **Ginkgo biloba** are practically free from alkyl phenols, have a high content of flavone glycosides and contain most of the **ginkgolides** and **bilobalide** originally present in the **leaves.**

Pref. the extracts contain 14-22 (especially 16-18) weight% flavone glycosides, 1.6-3wt.% total **ginkgolides** A, B, C and J, 1.4-2.7 weight% **bilobalide** and less than 10 ppm (especially less than 1 ppm) alkyl phenols.

USE/ADVANTAGE - The extracts promote circulation, inhibit ischaemic damage and aggregation of radical acceptors and thrombocytes. The extracts are especially useful in the therapy of peripheral and cerebral arterial disorders of the circulation. Removal of the alkyl phenols (which are associated with allergies) is achieved without the need to use the chlorinated hydrocarbons necessary in previous processes and thus the associated risks to the environment and the presence of residues in the pharmaceutical are avoided.
0/0
FS CPI
FA AB; DCN
MC CPI: **B04-A07E**; **B04-A07F2**; B12-F02; B12-H02

L83 ANSWER 37 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1991-172349 [24] WPIX
DNC C1991-074469
TI Enriched extracts of **Ginkgo biloba** - with high **flavone** glycoside content, and opt. high **Ginkgolide**(s) content and opt. high **bilobalide** content.
DC B04
IN JAGGY, H; OREILLY, J; O'REILLY, J
PA (MONT-N) MONTANA LTD; (WALL-N) WALLINGSTOWN CO LTD
CYC 18
PI DE 3940094 A 19910606 (199124)*
EP 436129 A 19910710 (199128)
R: AT BE CH DE ES FR GB GR IT LI LU NL SE
CA 2031384 A 19910605 (199133)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | JP 03264533 | A | 19911125 (199202) | | | | |
| | DE 3940094 | C | 19920702 (199227) | | 6p | A61K035-78 | <-- |
| | US 5389370 | A | 19950214 (199512) | | 6p | A61K035-78 | <-- |
| | EP 436129 | B1 | 19950412 (199519) | EN | 10p | A61K035-78 | <-- |
| | R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE | | | | | | |
| | DE 69018601 | E | 19950518 (199525) | | | A61K035-78 | <-- |
| | ES 2070981 | T3 | 19950616 (199531) | | | A61K035-78 | <-- |
| | JP 2503107 | B2 | 19960605 (199627) | | 6p | A61K035-78 | <-- |
| | KR 175067 | B1 | 19990201 (200039) | | | A61K035-78 | <-- |
| | CA 2031384 | C | 20020625 (200252) | EN | | A61K035-78 | <-- |

ADT DE 3940094 A DE 1989-3940094 19891204; EP 436129 A EP 1990-123140 19901203; JP 03264533 A JP 1990-400222 19901203; DE 3940094 C DE 1989-3940094 19891204; US 5389370 A Cont of US 1990-623861 19901204, US 1992-909137 19920706; EP 436129 B1 EP 1990-123140 19901203; DE 69018601 E DE 1990-618601 19901203; EP 1990-123140 19901203; ES 2070981 T3 EP 1990-123140 19901203; JP 2503107 B2 JP 1990-400222 19901203; KR 175067 B1 KR 1990-19827 19901204; CA 2031384 C CA 1990-2031384 19901203

FDT DE 69018601 E Based on EP 436129; ES 2070981 T3 Based on EP 436129; JP 2503107 B2 Previous Publ. JP 03264533

PRAI DE 1989-3940094 19891204

REP EP 86315

IC ICM **A61K035-78**
ICS A61K031-35; A61K031-70

ICA C07D311-30

AB DE 3940094 A UPAB: 19970502
Novel extracts from the **leaves** of **Ginkgo biloba** contain 40-60 (pref. 45-55)% **flavone** glycosides, 5.5-8.0 (pref. 7.0)% **ginkgolides** A, B, C and J, 5.0-7.0 (pref. 6.0)% **bilobalide**, less than 10% proanthocyanidines and at most 10 ppm (pref. less than 1 ppm) alkyl phenols.

Extracts of the above composition but containing less than 0.1% **bilobalide**, or (c) of the above compsn. but containing at most 0.1% **ginkgolides** are also new.

USE/ADVANTAGE - The extracts can be used in the therapy of peripheral and cerebral arterial disorders of the circulation (extract (A)) in the therapy of illnesses in which the platelet activating factor plays a pathogenic (extract (B)) and against demyelinising neuropathia and brain oedema (extract (C)). The enriched concentrates can be used in smaller daily doses than previous extracts and can be used in countries with high requirements of pharmaceutical quality. Removal of ineffective components in the safety of use and allows for more exact analytical determination of the main components. The low content of alkyl phenols means there is practically no danger of allergic reactions. @(6pp Dwg.No.0/0)

FS CPI

FA AB; DCN

MC CPI: **B04-A07F2**; B12-C10; B12-E01

ABEQ DE 3940094 C UPAB: 19930928
Prepn. of a **flavone** concentrate comprises extracting **Ginkgo biloba leaves** with aq. acetone, MeOH or an aq. 1-3C alkanol at temps. 40-100deg.C; evapn. of the solvent (until not more than 10 wt% is present), opt. diluting with water, (such that the solids content is 15-20 wt%); after cooling below 25degC, the crystalline ppt, is removed (contg. proanthocyanidines) and the aq. **filtrate** is extracted with an alkyl formate or acetate (b.pt. below 120degC), opt. mixed with an aliphatic or alicyclic hydrocarbon (b.pt. 60-100deg.C; 10-30 vol%); the remaining aq. soln. is then distilled to remove ester and hydrocarbon, then extracted with a water-immiscible 4-5C alkanol; the alcoholic estract is washed with water (several portions) and then evaporated or mixed with water and/or EtOH and evaporated to obtain the concentrate.

USE - The prods. are therapeutics for periphery and cerebral artery disorders.

0/0

ABEQ US 5389370 A UPAB: 19950328
Extract from **Ginkgo biloba leaves** comprises 40-60% **flavone** glycosides, 5.5-8% **ginkgolides** (A,B,C and D or mixts.) and 0.5-7% **bilobalide** and 0-10% proanthrocyanidins, with upto 10 ppm alkylphenols.

Prepn. comprises extn. of fresh or dried **leaves** with aq. acetone or aq. 1-3C alkanol or anhydrous methanol at 40-100 deg.C, reducing solvent content to 10% to form conc. aq. soln. which is diluted to a solid content of 15-20% wt. at 25 deg.C to form a ppte. of lipophilic matter which is **filtered** off. The remaining aq. soln. is multi-step extracted with formic or acetic acid esters at 120 deg.C. The solvent is distilled off and residual soln. extd. with 4-5C alkanol at room temp. The alkanol phases are water-washed and conc. and solvent removed by azeotropic distn. The residue is diluted with 40% aq. ethanol and opt. treated with activated C and **ginkolides** crystallised and purified by column chromatography e.g. on OHPr-dextran gel. The dilute residue may also be further extracted with aliphatic or cycloaliphatic hydrocarbon.

USE - Used for treating peripheral and cerebral circulatory disturbance.

Dwg.0/0

ABEQ EP 436129 B UPAB: 19950524
Extract from the **leaves** of **Ginkgo biloba** with a content of 40-60%, preferably 45-55% **flavone**, glycosides, 5.5-8.0% in particular 7.0% **ginkogolides** A, B, C and J, 5.0-7.0% in particular 6.0% **bilobalide**, less than 10% proanthrocyanidins and a maximum of 10 ppm, preferably less than 1 ppm, alkylphenol compounds.

Dwg.0/0

L83 ANSWER 38 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1991-172348 [24] WPIX
DNC C1991-074468
TI Extracts from **Ginkgo biloba leaves** - with high content of flavone glycoside(s) and **ginkgolide**(s) but with low alkyl phenol(s) content.
DC B04
IN SCHWABE, K P; SCHWABE, K
PA (SCHW-N) **SCHWABE W & CO GMBH**; (SCHW-N) **SCHWABE GMBH & CO WILLMAR**
CYC 19
PI

| | | | | | | |
|---|---|---|---|---|---|---|
| DE 3940092 | A | 19910606 (199124)* | | | | |
| EP 431536 | A | 19910612 (199124) | | | | |
| R: AT BE CH DE ES FR GB GR IT LI LU NL SE | | | | | | |
| CA 2031386 | A | 19910605 (199133) | | | | |
| DE 3940092 | C | 19910919 (199138) | | | | |
| JP 03279332 | A | 19911210 (199204) | | | | |
| ES 2024399 | A | 19920301 (199214) | | | | |
| US 5322688 | A | 19940621 (199424) | | 5p | A61K035-78 | <-- |
| JP 07025687 | B2 | 19950322 (199516) | | 5p | A61K035-78 | <-- |
| EP 431536 | B1 | 19950719 (199533) | EN | 7p | A61K035-78 | <-- |
| R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE | | | | | | |
| DE 69021019 | E | 19950824 (199539) | | | A61K035-78 | <-- |
| ES 2024399 | T3 | 19950916 (199543) | | | A61K035-78 | <-- |
| BR 1100103 | A3 | 19970819 (199739) | | | A61K035-78 | <-- |
| KR 185575 | B1 | 19990501 (200052) | | | A61K035-78 | <-- |

ADT DE 3940092 A DE 1989-3940092 19891204; EP 431536 A EP 1990-123142 19901203; JP 03279332 A JP 1990-400221 19901203; US 5322688 A Cont of US 1990-624177 19901204, US 1992-899016 19920615; JP 07025687 B2 JP 1990-400221 19901203; EP 431536 B1 EP 1990-123142 19901203; DE 69021019 E DE 1990-621019 19901203, EP 1990-123142 19901203; ES 2024399 T3 EP 1990-123142 19901203; BR 1100103 A3 BR 1996-1100103 19961219; KR 185575 B1 KR 1990-19826 19901204

FDT JP 07025687 B2 Based on JP 03279332; DE 69021019 E Based on EP 431536; ES 2024399 T3 Based on EP 431536
PRAI DE 1989-3940092 19891204
REP EP 86315; 9.Jnl.Ref; EP 436129
IC **A61K035-78**
ICM **A61K035-78**
ICS A61K031-70
AB DE 3940092 A UPAB: 19930928
Novel extracts from the **leaves** of **Ginkgo biloba** are practically free from alkyl phenols, have a high content of flavone glycosides and contain most of the **ginkgolides** and **bilobalide** originally present in the **leaves.**

Pref. the extracts contain 20-30 (especially 22-26) weight% flavone glycosids, 2.5-4.6 weight% total **ginkgolides** A, B, C and J, 2.0-4.0 weight% **bilobalide**, less than 10 ppm (especially less than 1 ppm) alkyl phenols and less than 10 weight% proanthocyanidine.

USE/ADVANTAGE - The extracts promote circulation, inhibit ischaemic damage and aggregation of radical acceptors and thrombocytes. The extracts are especially useful in the therapy of peripheral and cerebral arterial disorders of the circulation. Removal of the alkyl phenols (which are associated with allergies) is achieved without the need to use the chlorinated hydrocarbons necessary in previous processes and thus the associated risks to the environment and the presence of residues in the pharmaceutical are avoided. Removal of tannin-like substances (proanthocyanidine) achieved without the need to use lead cpds, thus reducing health risks to the work force and reducing costs.

0/0
FS CPI
FA AB; DCN
MC CPI: **B04-A07E**; **B04-A07F2**; B12-F02; B12-H02
ABEQ DE 3940092 C UPAB: 19930928
The extract contains the following:- (a) 20-30 (22-26) wt.% flavone glycoside; (b) 2.5-4.5 wt.% **ginkgolides** A,B,C and J; (c) 2.0-4.0 wt.% **bilobalide**; (d) less than 10 ppm (pref. less than 1 ppm) alkylphenol cpds.; and (e) less than 10 wt.% proanthocyanidines.

The extract is prepd. by extracting the **leaves** with water/acetone mixt., a water/1-3C alkanol mixt. or with anhydrous methanol. The organic solvents are removed until less than 10% remain. In the last distillation stage, water may be added. The resulting aq. soln. is thinned with water to give a solids content of 5-25 wt.%, cooled to below 25 deg.C and left to stand until a ppte. develops. The supernatant aqs. soln. is treated with (NH4)2SO4, followed by one or more extns. with methylethyl ketone or a mixt. of methylethyl ketone and acetone. The resulting extract is concentrated and thinned with water to give a solids content of 5-20%. This is followed by multistage extn. with butanol or pentanol. The non-aq. phase is concentrated to give a solids content of 50-70%. Enough water and ethanol is added to produce a mixt. contg. 5-20 dry wt.% extract and 20-60 wt.% aq. ethanol. This is followed by extn. with an aliphatic or cycloaliphatic solvent with a b.pt. of 60-100 deg.C and finally by concn. of the aq. phase at 60-80 deg.C under reduced pressure. A dry extract is obtd. with a water content of below 5%.

USE/ADVANTAGE - For the treatment of peripheral and cerebral arterial circulation disorders. The extract stimulates circulation, reduces ischaemia, inhibits thrombocyte aggregation and acts as a 'radical catcher'. The extract is prepd. without using environmentally damaging chlorinated solvents or lead cpds. which pose a danger to health. It contains almost no alkylphenol cpds. and is therefore unlikely to produce allergic reactions.

ABEQ US 5322688 A UPAB: 19940803
Prepn. of an enhanced extract of **Ginkgo biloba** free of alkylphenol cpds. and with high flavone glycoside content comprises extraction with an aq. acetone or aq. 1-3C alkanol and anhydrous methanol,

removal of solvent by distn. at reduced pressure, dilution of the resulting aq. soln. to solid content 5-25 % wt., cooling to ppte. and remove water-insol.lipophilic components, treatment with 10-30 % (NH4)2SO4; then extraction with Me Et ketone opt. mixt. with acetone, extraction of extract with butanol or pentanol, dilution of extract with water to form aq./alcohol soln.; extraction with aliphatic or cycloaliphatic solvent of B-Pt. 60-100 deg.C, to further remove alkylphenols and concn. aq. extract under reduced pressure and drying at 60-80 deg.C to water content below 5% wt.

USE - Prod. has 20-30 % wt. flavone glycosides, 2.5-4.5 % wt. **ginkgolides** A,B,C and J, 2.0-4.0 % wt. bilohalide and below 10 ppm. alkylphenols and below 10 % wt. proanthocyanidins, and is used for pharmaceuticals for treating peripheral and cerebral arterial circulatory disorders.

Dwg.0/0

ABEQ EP 431536 B UPAB: 19950824

Method of preparation of an extract from **Ginkgo biloba leaves**, the extract containing 20 to 30 weight percent, in particular 22 to 26 weight percent, favone glycosides, 2.5 to 4.5 weight percent of **ginkgolides** A, B, C and J (in total), 2.0 to 4.0 weight percent **bilobalide**, less than 10 ppm, in particular less than 1 ppm alkylphenol compounds and less than 10 weight percent proanthocyanidinis and characterised in that (a) the fresh or dried green **leaves** of **Ginkgo biloba** are extracted at a temperature of approximately 40 to 100 deg.C with aqueous acetone, an aqueous alkanol of 1 to 3 C-atoms or anhydrous methanol, (b) most of the organic solvent is separated from the extract to a maximum content of 10 weight percent, whereby water can be added in the last steps of distillation, (c) the remaining concentrated aqueous solution is diluted with water to a solids content of 5 to 25 weight percent left to cool, while being stirred, to a temperature below 25 deg.C left to stand until a precipitate forms and the resultant precipitate consisting of the lipophilic components whichi do not dissolve well in water is removed.

Dwg.0/0

L83 ANSWER 39 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1991-172347 [24] WPIX
DNC C1991-074467
TI Extracts from **Ginkgo biloba leaves** - with high content of flavone glycoside(s) and **ginkgolide**(s) and **bilobalide** but with low alkyl phenol(s) content.
DC A96 B04
IN SCHWABE, K P
PA (SCHW-N) **SCHWABE W GMBH**; (SCHW-N) **SCHWABE W & CO GMBH**
CYC 18
PI DE 3940091 A 19910606 (199124)*
EP 431535 A 19910612 (199124)
R: AT BE CH DE ES FR GB GR IT LI LU NL SE
CA 2031385 A 19910605 (199133)
DE 3940091 C 19910919 (199138)
JP 03279331 A 19911210 (199204)
ES 2024400 A 19920301 (199214)
EP 431535 B1 19940302 (199409) EN 12p A61K035-78 <--
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE
DE 69007035 E 19940407 (199415) A61K035-78 <--
ES 2024400 T3 19940416 (199419) A61K035-78 <--
US 5399348 A 19950321 (199517) 5p A61K035-78 <--
JP 07076176 B2 19950816 (199537) 5p A61K035-78 <--
KR 154977 B1 19981116 (200029) A61K035-78 <--
CA 2031385 C 20010918 (200157) EN A61K035-78 <--
ADT DE 3940091 A DE 1989-3940091 19891204; EP 431535 A EP 1990-123141 19901203; JP 03279331 A JP 1990-400220 19901203; EP 431535 B1 EP 1990-123141 19901203; DE 69007035 E DE 1990-607035 19901203, EP

1990-123141 19901203; ES 2024400 T3 EP 1990-123141 19901203; US 5399348 A Cont of US 1990-625729 19901204, US 1992-905167 19920624; JP 07076176 B2 JP 1990-400220 19901203; KR 154977 B1 KR 1990-19825 19901204; CA 2031385 C CA 1990-2031385 19901203

FDT DE 69007035 E Based on EP 431535; ES 2024400 T3 Based on EP 431535; JP 07076176 B2 Based on JP 03279331

PRAI DE 1989-3940091 19891204

REP EP 86315

IC **A61K035-78**

ICM **A61K035-78**

ICS A61K031-70

AB DE 3940091 A UPAB: 19930928

Novel extracts from the **leaves** of **Ginkgo biloba** are practically free from alkyl phenols, have a high content of flavone glycosides and contain most of the **ginkgolides** and **bilobalide** originally present in the **leaves.**

Pref. the extracts contain 20-30 (especially 22-26) weight% flavone glycosides, 2.5-4.5 weight% total **ginkgolides** A, B, C and J, 2.0-4.0 weight% **bilobalide**, less than 10 ppm (especially less than 1 ppm) alkyl phenols and less than 10 weight% proanthocyanidine.

USE/ADVANTAGE - The extracts promote circulation, inhibit ischaemic damage and aggregation of radical acceptors and thrombocytes. The extracts are especially useful in the therapy of peripheral and cerebral arterial disorders of the circulation. Removal of the alkyl phenols (which are associated with allergies) is achieved without the need to use the chlorinated hydrocarbons necessary in previous processes, and thus the associated risks to the environment and potential residues in the phenol are avoided.

0/0

FS CPI

FA AB; DCN

MC CPI: A12-V01; **B04-A07F2**; B12-E01

ABEQ DE 3940091 C UPAB: 19930928

The extract contains the following: (a) 20-30 (22-26) wt.% flavone glycoside, (b) 2.5-4.5 wt.% **ginkgolides** A,B,C and J. (c) 2.0-4.0 wt.% biloebalide. (d) less than 10 ppm (pref. less than 1 ppm) alkylphenol cpds.; and (e) less than 10 wt.% proanthocyanidines.

The extract is prepd. by extracting the **ginkgo biloba leaves** with a water/acetone mixt., a water/1-3C alkanol mixt. or anhydrous methanol. The organic solvents are removed until less than 10% remain. In the last distillation stage, water may be added. The resulting aq. soln. is thinned with water to give a solids content of 5-25 wt.%, cooled to below 25 deg.C and left to stand. A ppte. develops. The supernatant aq. soln. is treated with (NH4)2SO4 followed by one or more extns. with methylethyl ketone or a mixt. of methylethyl ketone and acetone. The resulting extract is conc. and thinned with a 50/50 water/ethanol mixt. (by wt.) to give a soln. contg. 10 wt.% solids. The soln. is treated with a lead cpd. or an insoluble polyamide, and extracted with an aliphatic or cycloaliphatic solvent with a b.pt. 60-100 deg.C. This is followed by concn., further treatment with (NH4)SO4 and extn. with methylethyl ketone and ethanol. The organic phase is concentrated to give a solid phase content of 50-70 wt.%, and the conc. is dried until the water content is below 5%.

USE/ADVANTAGE - For the treatment of peripheral and cerebral arterial circulation disorders. The extract stimulates circulation, reduces ischaemia, inhibits thrombocyte aggregation and acts as a 'radical catcher'. The extract is prepd. without using environmentally damaging solvents. It contains almost no alkylphenol cpds. and is therefore unlikely to produce allergic reactions.

ABEQ EP 431535 B UPAB: 19940418

Extract from the **leaves** of **Ginkgo biloba**, containing - 20-30 weight percent flacon glycosides, - 2.5-4.5 weight percent of **ginkgolides** A, B, C and J (in total), - 2.0-4.0

weight percent **bilobalide**, - less than 10 ppm alkylphenol compounds and - less than 10 weight percent proanthocyanidins.
Dwg.0/0

ABEQ US 5399348 A UPAB: 19950508
Extract from **Ginkgo biloba leaves** contains flavone glycosides (20-30 wt%); **ginkogolides**-A, -B, -C and -J (2.5-4.5 wt%); **bilobalide** (2.0-4.0 wt%); proanthocyanidines (less than 10 wt%); and only traces (less than 10 ppm) of alkylphenol derivs. Pharmaceutical compsn. comprises this extract as the active component, dispersed with the usual carriers and opt. additives.
USE - The prods. are therapeutics for peripheral and cerebral arterial circulatory disorders.
ADVANTAGE - The prods. have radical scavenging properties, stimulate blood circulation, prevent ischemic disorders and inhibit blood platelet aggregation.
Dwg.0/0

L83 ANSWER 40 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1990-377677 [51] WPIX
DNC C1990-164505
TI Isolation of **ginkgolides** from **ginkgo leaves** - providing prod. useful in treating e.g. asthma, dementia and cardiac disorders.
DC B03
IN KWAK, W J; OH, K B; PARK, H K
PA (SUNK-N) SUNKYONG IND LTD; (SUNK-N) SUNKYONG INDS LTD; (SUNK-N) SUNKYONG IND LTD; (SUNK-N) SUN KYONG IND LTD
CYC 6
PI EP 402925 A 19901219 (199051)*
R: BE DE FR
JP 03024084 A 19910201 (199111)
US 5089636 A 19920218 (199210)
EP 402925 A3 19920102 (199320)
KR 9402795 B1 19940402 (199602) A61K035-78 <--
JP 2511558 B2 19960626 (199630) 4p C07D493-22
EP 402925 B1 19970924 (199743) EN 7p C07D493-22
R: BE DE FR
DE 69031481 E 19971030 (199749) C07D493-22
ADT EP 402925 A EP 1990-111246 19900614; JP 03024084 A JP 1990-155552 19900615; US 5089636 A US 1990-539424 19900615; KR 9402795 B1 KR 1989-8340 19890616; JP 2511558 B2 JP 1990-155552 19900615; EP 402925 B1 EP 1990-111246 19900614; DE 69031481 E DE 1990-631481 19900614, EP 1990-111246 19900614
FDT JP 2511558 B2 Previous Publ. JP 03024084; DE 69031481 E Based on EP 402925
PRAI KR 1989-8340 19890616
REP NoSR.Pub; 4.Jnl.Ref; DE 2117429; EP 86315; 6.Jnl.Ref
IC C07D307-00; C07D493-22
ICM C07D493-22
ICS C07D307-00
ICA A61K035-78
ICI C07D307:00, C07D493-
AB EP 402925 A UPAB: 19971113
A method of isolating **ginkgolides** from **leaves** of the **Ginkgo** tree comprises; a) adjusting the pH of an aqueous solution of an extract of **Gingko** tree **leaves** to 1-9 by adding alkaline aqueous solution, b) extracting the aqueous solution obtd. in (a) with lower acetates, lower ketones or benzenes, dehydrating and drying the organic layer to obtain a powder, c) adjusting the pH of the aqueous layer obtd. in (b) to 1-3 by adding acidic aqueous solution, extracting the solution with lower ethers or CHCl3, dehydrating and the extract, d) dissolving the dry powder obtd. in (b) and residue obtd. in (c) in a lower alcohol, e) adding

an aqueous solution of lead acetate to the solution obtd. in (d), removing the ppte.
and concentrating the **filtrate** to obtain a mixture powder of **ginkgolides.**
USE - **Leaves** of the **Ginkgo** tree are known to contain physio-active substances, **ginkgolides**, useful in treating e.g. asthama, dementia senilis, cardiac disorders and a broad range of circulatory system diseases. @(6pp Dwg.No.0/6)idu

FS CPI
FA AB; DCN
MC CPI: B04-A07D5; **B04-A07F2**; **B11-B**; B12-C10; B12-D02; B12-D02B; B12-D03; B12-D07; B12-D09; B12-D10; B12-F01B; B12-F07; B12-G04A; B12-K02

ABEQ EP 402925 A UPAB: 19930928
A method of isolating **ginkgolides** from **leaves** of the **Ginkgo** tree comprises; a) adjusting the pH of an aq. soln. of an extract of **Gingko** tree **leaves** to 1-9 by adding alkaline aq. soln., b) extracting the aq. soln. obtd. in (a) with lower acetates, lower ketones or benzenes, dehydrating and drying the organic layer to obtain a powder, c) adjusting the pH of the aq. layer obtd. in (b) to 1-3 by adding acidic aq. soln., extracting the soln. with lower ethers or CHCl3, dehydrating and the extract, d) dissolving the dry powder obtd. in (b) and residue obtd. in (c) in a lower alcohol, e) adding an aq. soln. of lead acetate to the soln. obtd. in (d), removing the ppte. and concentrating the **filtrate** to obtain a mixt. powder of **ginkgolides.**
USE - **Leaves** of the **Ginkgo** tree are known to contain physio-active substances, **ginkgolides**, useful in treating e.g. asthma, dementia senilis, cardiac disorders and a broad range of circulatory system diseases.
0/6

ABEQ US 5089636 A UPAB: 19930928
A new sepn. of **ginkgolides** from **leaves** of **Ginkgo** tree comprises (a) adjusting pH of aq. soln. of **leaf** ext. to 7 by addn. aq. alkali, (b) extn. aq. soln. with lower alkyl acetate, ketone, benzene or alkylbenzene, sepn. of phases and obt. powder from organic phase, (c) adjust pH of aq. phase to 1-3.5 by addn. acid and ext. with water-insol. organic solvent and drying the ext. obt.(d) dissolve the powders from (b) and (c) in lower alkyl alcohol and add aq. PbAc4 to ppte. **ginkgolides** which are sepd. by **filtration.**
Pref. extn. is at 50-100 deg.C. for 5-6 hrs. Purificn. may be passing through column of activated C or silicas gel in solvent and recrystallisation from aq. alcohol/acetone.
USE - The **ginkgolides** are used to treat PAF-mediated diseases ( compete with PAF) including asthma, bronchitis, dermatitis, allergy, cardiac and rheumatoid disorders.

ABEQ EP 402925 B UPAB: 19971030
A method of isolating **ginkgolides** from the **leaves** of the **Ginkgo** tree which is characterised by a series of steps as follows:
a) to adjust the pH of an aqueous solution of an extract of the **leaves** of the **Ginkgo** tree to the range of 1 to 9 by adding an alkaline aqueous solution,
b) to extract the aqueous solution treated as above with lower acetates, lower ketones or benzenes, separate the solution into a layer of aqueous solution and a layer of organic solvent, dehydrate and dry the layer of organic solvent, and obtain a powder,
c) to adjust the pH of the layer of aqueous solution separated in the afore-said process b to the range of 1 to 3 by adding an acidic aqueous solution, extract the layer of aqueous solution treated as above with lower ethers, chloroform or dichloromethane, dehydrate and dry the obtained extract,

d) to dissolve the dry powder obtained the afore-said process b and the residue obtained in the afore-said process c in a lower alcohol,

e) to add an aqueous solution of lead acetate to the solution obtained in the afore-said process d, remove the precipitate, concentrate the **filtrate**, and obtain a mixture powder of **ginkgolides**

f) to purify the obtained mixture powder of **ginkgolides**

I) either by passing the afore-said mixture powder through an adsorption column of activated charcoal and silicagel using a mixture solvent of lower ketones and lower alcohols and putting the obtained residue through separation recrystallisation using anhydrous alcohol and an aqueous solution of acetone,

II) or by dissolving the afore-said mixture powder in lower ketones or lower alcohols, adding distilled water to the obtained solution, centrifuging the solution thus treated and then putting the obtained residue through separation recrystallisation using anhydrous alcohol and an aqueous solution of acetone.

L83 ANSWER 41 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1990-079062 [11] WPIX
DNC C1990-034645
TI Chocolate production - where **ginkgo** extract is added.
DC B04 D13
PA (DAIL) DAICEL CHEM IND LTD
CYC 1
PI JP 02031646 A 19900201 (199011)* 3p
ADT JP 02031646 A JP 1988-182033 19880721
PRAI JP 1988-182033 19880721
IC A23G001-00; **A61K035-78**
AB JP 02031646 A UPAB: 19930928
Chocolate contains **ginkgo** extract as an essential component.

The **ginkgo** extract pref. contains either one or two terpenes e.g. **ginkolide, bilobalide,** **flavonoids** e.g. quercetins, kaempherols.

USE/ADVANTAGE - The chocolate may be prepared by using a common chocolate producing plant without alteration. The prod. is equivalent to conventional chocolate in appearance, smoothness, flavour and palate.

In an example, preparation of **ginkgo** extract, dry **leaves** of **ginkgo** (1 g) were ground finely, and immersed in ethanol (20 ml). After refluxing at 60 deg.C for 1 hr., **leaves** were removed by **filtration**, solvent of the **filtrate** was distilled away, and 230 mg of the extract was obtd.. The extract was suspended in 20% etOH aqueous solution, insol. matters were removed, then solvent was distilled away. 120 mg of extract was obtd..

0/0
FS CPI
FA AB
MC CPI: **B04-A07F2**; B06-A01; D03-E07

L83 ANSWER 42 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1989-250642 [35] WPIX
DNC C1989-111651
TI Extraction of **Gingko biloba leaves** - using aqueous ketonic solvent to give prod. low in proantho cyanidine(s) used to treat peripheral and cerebral circulatory disorders.
DC B04
IN AYROLES, G; CADIOU, M; ROSSARD, R M
PA (FABR) FABRE P INDUSTRIE; (FABR) FABRE P INDUSTRIE
CYC 15
PI EP 330567 A 19890830 (198935)* EN 5p
R: AT BE CH DE ES GR IT LI LU NL SE
FR 2627387 A 19890825 (198941)
JP 01258626 A 19891016 (198947)

US 4981688 A 19910101 (199104) 4p
EP 330567 B 19911023 (199143)
R: AT BE CH DE ES GB GR IT LI LU NL SE
DE 68900345 E 19911128 (199149)
JP 2717178 B2 19980218 (199812) 4p A61K035-78 <--
ADT EP 330567 A EP 1989-400495 19890222; FR 2627387 A FR 1988-2227 19880224; JP 01258626 A JP 1989-45027 19890322; US 4981688 A US 1989-313372 19890221; JP 2717178 B2 JP 1989-45027 19890223
FDT JP 2717178 B2 Previous Publ. JP 01258626
PRAI FR 1988-2227 19880224
REP 2.Jnl.Ref; EP 86315; FR 2007352; FR 2132761; JP 58210034; JP 62033118; EP 237066
IC **A61K035-78**; B01D011-02; C07G017-00
ICM **A61K035-78**
ICS B01D011-02; C07G017-00
AB EP 330567 A UPAB: 19940517
An extract of **Ginkgo biloba leaves** is obtd. as follows: 1) the crushed **leaves** are extrd. with an aqueous ketonic solvent 2) the extract is concnd. to ppte **biflavonoids** and hydrophobic material 3) the aqueous concentrate is **filtered** 4) this is basified to ppte proanthocyanidines, these being eliminated by **filtration** 5) the **filtrate** is acidified 6) the **filtrate** undergoes a liquid -liquid extraction using a 4-6C ketone in the presence of ammonium sulphate, and 7) the ketonic phase is dried to **leave** the desired extract.
USE/ADVANTAGE - The extract is used to treat peripheral and cerebral circulatory disorders. The process gives a purer material than other extraction processes, is easier to carry out, and is more economical.
Dwg.0/0
FS CPI
FA AB; DCN
MC CPI: **B04-A07F2**; B12-C10; B12-E01; B12-G04A
ABEQ EP 330567 B UPAB: 19930923
An extract of **Ginkgo biloba leaves** is obtd. as follows: 1) the crushed **leaves** are extra. with an aq. ketonic solvent 2) the extract is concnd. to ppte **bioflavonoids** and hydrophobic material 3) the aq. concentrate is **filtered** 4) this is basified to ppte proanthocyanidines, these being eliminated by **filtration** 5) the **filtrate** is acidified 6) the **filtrate** undergoes a liq. -liq. extraction using a 4-6C ketone in the presence of ammonium sulphate, and 7) the ketonic phase is dried to **leave** the desired extract.
USE/ADVANTAGE - The extract is used to treat peripheral and cerebral circulatory disorders. The process gives a purer material than other extn. processes, is easier to carry out, and is more economical.
0/0
ABEQ US 4981688 A UPAB: 19930923
Obtaining extract from **Ginkgo biloba leaves** comprises: a) grinding the **leaves**; b) extn. of the ground **leaves** prepn. using aq. ketone solvent; c) concn. of extn. liquors in order to ppte **biflavonoid** 1 hydrophobic substances; d) **Filtration** of the aq. concn.; e) alkinisation of **filtrate** to a pH of at least 8 by addn. of alkali (ne earth) metal hydroxides, amine gas or amine to ppte. the proanthocyanidins; f) removal of insol. fraction; g) acidification of **filtrate**; h) liq.-liq. extn. of **filtrate** with 4-8C ketone in ammonium sulphate which is obtd. by phasing to dryness.
USE/ADVANTAGE - For oral or injection admin. for circulatory disorders.

L83 ANSWER 43 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1985-116906 [20] WPIX
DNC C1985-050580

TI Medicaments containing **ginkgo biloba** di lactone **bilobalide** - for treatment of nervous diseases, pref. demyelinising neuropathy, encephalopathy and myelopathy and brain oedema.

DC B02

IN CHATTERJEE, S S; GABARD, B L; JAGGY, H E W

PA (SCHW-N) **SCHWABE GMBH & CO WILLMAN**; (SCHW-N) **SCHWABE GMBH & CO WILLMAR**; (SCHW-N) **SCHWABE GMBH & CO WILLMAR**

CYC 15

PI DE 3338995 A 19850509 (198520)* 20p
EP 143977 A 19850612 (198524) DE
R: AT BE CH DE FR GB IT LI LU NL
JP 60109522 A 19850615 (198530)
ZA 8408369 A 19850429 (198532)
US 4571407 A 19860218 (198610)
JP 62041688 B 19870904 (198739)
CA 1238280 A 19880621 (198832)
US 4892883 A 19900109 (199010)
DE 3338995 C 19900322 (199012)
EP 143977 B1 19950315 (199515) DE 13p A61K031-365
R: AT BE CH DE FR GB IT LI LU NL
DE 3486378 G 19950420 (199521) A61K031-365
IE 66527 B 19960124 (199613) A61K031-365

ADT DE 3338995 A DE 1983-3338995 19831027; EP 143977 A EP 1984-112902 19841025; JP 60109522 A JP 1984-225657 19841026; ZA 8408369 A ZA 1984-8369 19841026; US 4571407 A US 1984-662598 19841019; US 4892883 A US 1988-256233 19881011; EP 143977 B1 EP 1984-112902 19841025; DE 3486378 G DE 1984-3486378 19841025, EP 1984-112902 19841025; IE 66527 B IE 1984-2765 19841026

FDT DE 3486378 G Based on EP 143977

PRAI DE 1983-3338995 19831027

REP 6.Jnl.Ref; A3...8719; No-SR.Pub; 2.Jnl.Ref

IC A61K009-00; A61K031-36; **A61K035-78**; C07D493-14
ICM A61K031-365
ICS A61K009-00; A61K031-36; **A61K035-78**; C07D493-14

AB DE 3338995 A UPAB: 19950518
Medicaments containing **bilobalide** (I; a lactone from the **leaves** of **Ginkgobiloba**) for the treatment of nervous diseases.

Use of **bilobalide** in the treatment of nervous diseases. Bisobalide can be isolated from **Ginkgobiloba leaves** by e.g. the procedure of Leibig's Ann. Chemical 724 (1969), 214-216.

Suitable formulations include ointments, solutions, dragees, tablets, capsules and injection or infusion solns. Daily dosages are generally 5-40 mg orally, 0.5-5 mg parenterally, or 5-100 mg percutaneously.

USE - Treatment of neurological disorders caused by or associated with pathological changes in the myelin layer of the nerve fibres, especially demyelinising neuropathies, encephalopathnics and myelopathies and brain oedenas.

0/2

Dwg.0/2

FS CPI

FA AB

MC CPI: B06-A03; B12-C10; B12-E01

ABEQ DE 3338995 C UPAB: 19930925
Medicaments contg. **bilobalide** (I; a lactone from the **leaves** of **Ginkgobiloba**) for the treatment of nervous diseases.

Use of **bilobalide** in the treatment of nervous diseases. Bisobalide can be isolated from **Ginkgobiloba leaves** by e.g. the procedure of Leibig's Ann. Chem. 724 (1969), 214-216.

Suitable formulations include ointments, solutions, dragees, tablets, capsules and injection or infusion solns. Daily dosages are generally 5-40 mg orally, 0.5-5 mg parenterally, or 5-100 mg percutaneously.

USE - Treatment of neurological disorders caused by or associated with pathological changes in the myelin layer of the nerve fibres, esp. demyelinising neuropathies, encephalopathnics and myelopathies and brain oedemas.

0/2

ABEQ US 4571407 A UPAB: 19930925

Treatment of neuropathic disorders comprises administering **bilobalid** (I). Pref. amt. of (I) is 0.5-100 (5-40)mg/kg patient body wt.

USE/ADVANTAGE - (I) alleviates paraesthesia, paresis, abnormal reflexes, muscular atrophy, muscle spasms, tremor, disturbances of superficial and deep sensibility, headaches and pains in the limbs, disturbances of speech, vision and hearing, vertigo disturbances of conciousness, lack of coordination and concn., memory impairment and disorientation. It also alleviates disturbances of cerebral and peripheral blood flow. May be administered orally or parenterally, intramuscularly or intravenously. The use of (I) to treat demyelinating neuropathy, encaphalopathy, myelopathy and cerebral oedema is claimed.

ABEQ US 4892883 A UPAB: 19930925

Pharmaceutical compsns. for treating neuropathic disorders comprise a combination of flavone glycosides and **bilobalide** in a pharmaceutical carrier. The compsn. is pref. a whole extract of the **leaves** of **Ginko biloba.**

The compns. pref. contain 0.5-40, esp. 3-20% of **bilobalide** and 99.5-60, esp. 97-80% of residual monoextract of **Ginko biloba.**

USE - For treating demyelinating neuropathies, encephalopathies and myelopathies or cerebral oedemas.

ABEQ EP 143977 B UPAB: 19950425

**Bilobalid** for use as substance counteracting nervous diseases.

Dwg.0/2

L83 ANSWER 44 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 1972-67548T [42] WPIX

TI Vasoactive substances produced by extracting from - **ginkgo biloba leaves.**

DC A23 A96 B04

PA (SCHW-N) **FA SCHWABE DR W**; (SCHU-I) SCHUWABE W; (SCHW-I) **SCHWABE**; (SCH-N) **SCHWABE W**

CYC 5

| | | | | |
|---|---|---|---|---|
| PI | BE 781802 | A | | (197242)* |
| | DE 2117429 | A | | (197243) |
| | NL 7204696 | A | | (197244) |
| | FR 2132761 | A | | (197308) |
| | JP 49027323 | B | 19740717 | (197432) |
| | DE 2117429 | B | 19810527 | (198123) |
| | JP 47035107 | A | 19721124 | (198347) |
| | NL 175383 | B | 19840601 | (198425) |

PRAI DE 1971-2117429 19710408

IC **A61K035-78**

AB BE 781802 A UPAB: 19930831

Process comprises (1) extraction of the dried or fresh green **leaves** with an aqueous ketone or lower alkanol at 40-100 degrees (2) extraction of this extract with a water-immiscible, lipophilic solvent at 15-50 degrees (3) treating the aqueous extract with (NH4)2SO4 (I) and extracting with MEK (4) evaporating the MEK extract, diluting with an opt. aqueous lower alkanol and treating this solution either (5) with a Pb cpd., pref. freshly prepared Pb hydroxide, discarding the ppte. concentrating the alcohol solution addition of (I) and extraction with MEK to give an alcohol-MEK phase, addition of (I), removal of water and concentration of

the alcohol-MEK after drying or (6) with a powdered high mol. weight polyamide, pref. Nylon 6, filtn. and concentrate (7) dissolving the residue from
(5) or (6) in EtOH, filtn. and concentration The product is used for treating impaired peripheral circulation, intermittent claudication and vascular disorders, and can be used by injection or perfusion.
FS CPI
FA AB
MC CPI: A05-F01E; A12-V01; **B04-A07F**; B12-E01

L83 ANSWER 45 OF 45 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1970-19094R [12] WPIX
TI Vaso active substances obtained from **gingko biloba** - **leaves.**
DC B04 C03
PA (SCHW-N) **SCHWABE GMBH & CO WILLMAR**
CYC 3
PI FR 2007352 A (197012)*
JP 46028091 B (197132)
DE 1767098 B (197223)
PRAI DE 1968-1767098 19680329
IC A61K027-00
AB FR 2007352 A UPAB: 19930831
Vaso-active substances obtained from **gingko biloba** **leaves.** F3A. Used for treating peripheral and cerebral arterial circulation disorders in the aged and are extracted from fresh or dried green **leaves** of **Gingko biloba** L. syn.
Salisburia adiantifolia Smith with an organic solvent (lower alcohol or ketone) miscible with water and containing water at pref. 60-80 degrees C. This extract is itself extracted with a lipophilic solvent (lower halogenated aliphatic hydrocarbon) immiscible with water at 15-50 degrees C opt. followed by evaporation of the aqueous organic phase under reduced pressure. The extract contains quercitin, isoquercitine, luteoline and kamferol-3-rhamnoside glycosides and sitosterine and as the extractions take place under very moderate conditions, the active substances are obtained in their original form. The aqueous organic phase extract can be used without purification for oral administration but not for injections, when it must be treated with (NH4)2SO4, extracted with organic solvent partially soluble in H2O / (C2H5)2CO or C2H5COCH3/, evaporated, extracted with low aliphatic alcohol (pref. C2H5OH), residue dried under reduced pressure, powder dissolved in water, pH adjusted to 7.5 and this solution diluted 9 times with 4% solution of sorbitol in H2O.
FS CPI
FA AB
MC CPI: **B04-A07F**; B12-E01; **C04-A07F**; C12-E01

=> d his

(FILE 'HOME' ENTERED AT 11:30:30 ON 22 APR 2004)
SET COST OFF

FILE 'REGISTRY' ENTERED AT 11:30:38 ON 22 APR 2004
E GINKGOLIDE/CN
L1 4 S E4,E6-E8
E GINKGOLIDE B/CN
E E3,E10
E GINKGOLIDE B/CN
L2 2 S E3,E10
L3 5 S E13,E14,E16-E18
E GINKGOLIC ACID/CN
L4 2 S E3-E5
E BILOBALIDE/CN

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L5            1 S E3

     FILE 'HCAPLUS' ENTERED AT 11:32:52 ON 22 APR 2004
                 E GINKGO/CT
L6         1851 S E4
                 E E3+ALL
L7         2267 S E5+NT
L8            1 S E7/BI
L9         2273 S E8,E9/BI
                 E E4+ALL
L10        2269 S E4+NT
L11        2299 S (GINKGO OR GINGKO)()BILOBA?
L12        2669 S L6-L11
L13           6 S L12 AND (ULTRAFILT? OR ULTRA(L)FILTR?)
L14           4 S L13 NOT (ELECTRON OR FOODS)/TI
L15           1 S (WO99-DE1812 OR DE98-19829516)/AP,PRN
                 E WILLMAR/PA,CS
L16          19 S E13-E34
                 E OSCHMANN R/AU
L17          25 S E3,E4
                 E OESCHMANN R/AU
                 E GRETHLEIN E/AU
L18           4 S E3-E5
L19           2 S L12 AND L16-L18
L20           5 S L14,L15,L19
L21         247 S L12 AND L1-L3
L22         339 S L12 AND (GINKGOLIDE OR GINGKOLIDE)
L23          66 S L12 AND (GINKGOLIC OR GINGKOLIC)()ACID
L24         398 S L21-L23
L25         138 S L12 AND ?TERPEN?(L)?LACTONE?
L26         178 S L12 AND ?FLAVON?(L)?GLYCOSIDE?
L27         554 S L24-L26
                 E FILTRATION/CT
                 E E3+ALL
L28       22283 S E3,E2+NT
                 E E12+ALL
L29       66577 S E2+NT
                 E E1+ALL
L30          83 S L12 AND L28,L29
L31          17 S L30 AND (PY<=1998 OR PRY<=1998 OR AY<=1998)
                 SEL DN AN 1 4 11 14 16 17
L32          11 S L31 NOT E1-E18
L33          15 S L20,L32
L34         228 S L27 AND (PY<=1998 OR PRY<=1998 OR AY<=1998)
L35           7 S L34 AND  (?FILTER? OR ?FILTR?)
                 SEL DN AN 6 7
L36           5 S L35 NOT E19-E24
L37          18 S L33,L36
L38          18 S L37 AND L6-L37
L39          14 S L38 AND (LEAF OR LEAVE)
L40           4 S L38 NOT L39
L41           3 S L40 NOT COUMAROYL
L42          17 S L39,L41
L43          15 S L42 AND (?FLAVON? OR ?TERPEN? OR ?LACTONE?)
L44           2 S L42 NOT L43
L45           1 S L44 NOT ANTIOXIDANT
L46          16 S L43,L45
L47           0 S L12 AND COLD(L)?PRECIPITAT?
                 E PRECIPITATION/CT
L48       23147 S E3,E5+NT
L49          18 S E25
                 E E3+ALL
                 E E2+ALL
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L50       20084 S E2+NT
                E PRECIPITATION, THERMAL/CT
                E E3+ALL
L51           0 S L12 AND L48-L50

     FILE 'HCAPLUS' ENTERED AT 11:56:39 ON 22 APR 2004

     FILE 'WPIX' ENTERED AT 11:57:13 ON 22 APR 2004
L52         415 S L9/BIX OR L11/BIX
                E GINKGO/BI,ABEX
L53        1446 S (GINKGO? OR GINGKO? OR GINKO? OR GINGO?)/BIX
L54         516 S BILOB?/BIX
L55        1489 S L52-L54
L56           1 S L55 AND (DE98-19829516 OR WO99-DE1812)/AP,PRN
                E OSCHMANN R/AU
L57          16 S E3
                E GRETHLEIN E/AU
L58           4 S E3
                E WILLMAR/PA
L59          61 S E3-E11
                E SCHWABE/PA
L60         317 S E3-E52
L61          13 S L55 AND L57-L60
L62          13 S L56,L61
L63          87 S L55 AND (N160? OR N161? OR N163?)/M0,M1,M2,M3,M4,M5,M6
L64          63 S L55 AND (B11-B OR C11-B OR E11-Q)/MC
L65         201 S L55 AND (B04-A10B OR C04-A10B OR B04-A07F2 OR C04-A07F2 OR B0
L66         806 S L55 AND (B04-A07 OR C04-A07 OR B04-A07E OR C04-A07E OR B04-A0
L67         891 S L63-L66
L68           2 S L67 AND (?ULTRAFILTR? OR ?ULTRAFILTER?)/BIX
L69           1 S L67 AND (?ULTRA?()(?FILTR? OR ?FILTER?))/BIX
L70           3 S L68,L69
L71         127 S L67 AND (?FILTER? OR ?FILTR?)/BIX
L72          30 S L71 AND (?LACTONE? OR ?FLAVON?)/BIX
L73           4 S L71 AND A61K031-365/IC,ICM,ICS
L74          12 S L71 AND (?BILOBAL? OR ?GINKGOLID? OR ?GINGKOLID?)/BIX
L75          27 S L62,L70,L73,L74
L76          18 S L72 NOT L75
L77          45 S L75,L76
L78          39 S L77 AND (LEAF OR LEAVE)/BIX
L79           6 S L77 NOT L78
L80          45 S L78,L79
L81          40 S L80 AND A61K035-78/IC,ICM,ICS
L82           5 S L80 NOT L81
L83          45 S L81,L82 AND L52-L82

     FILE 'WPIX' ENTERED AT 12:21:29 ON 22 APR 2004

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